

THE LIGHTSHIP AT THE NORE.

H. & A.R. III.

Arnold's Home & Abroad Readers

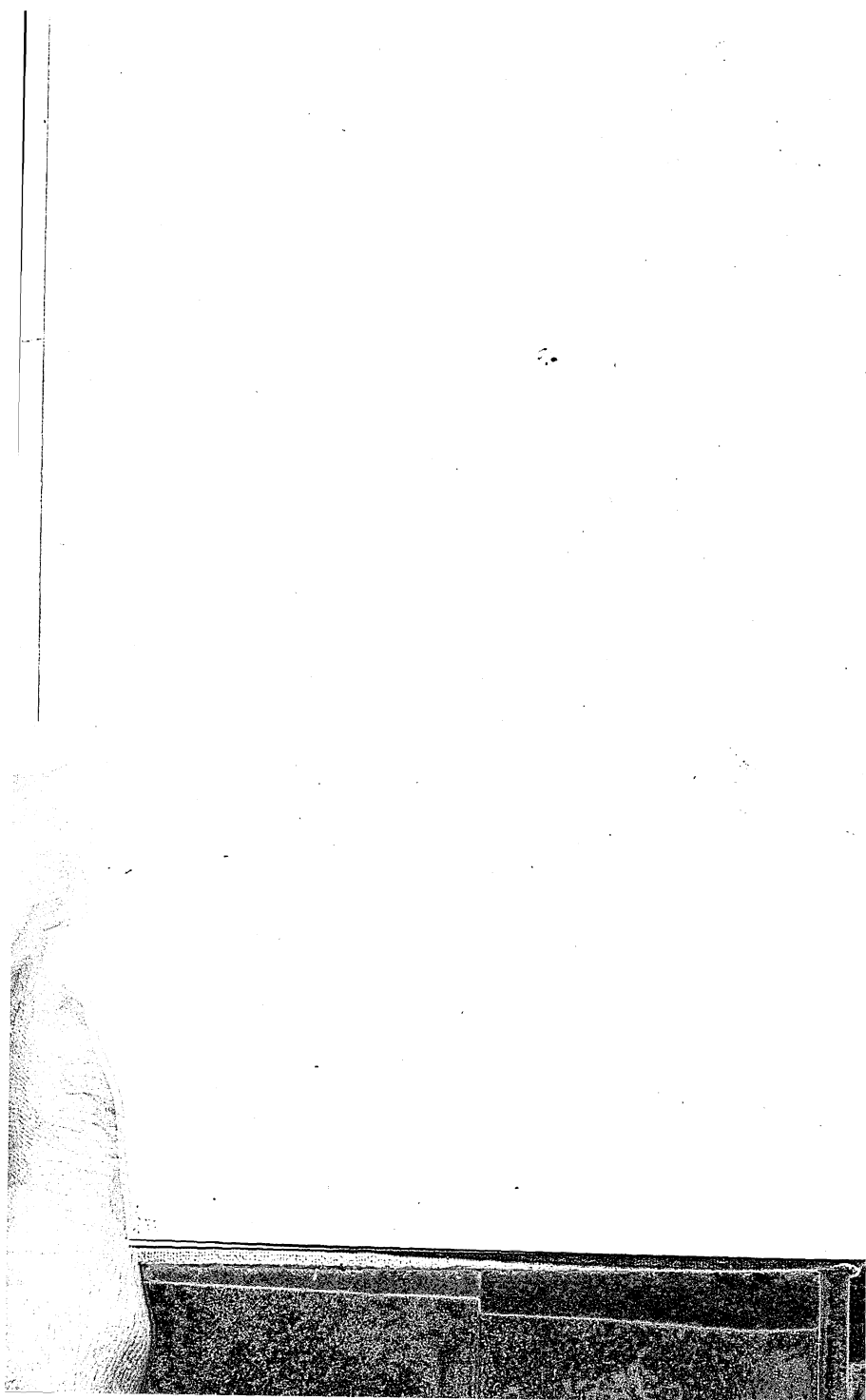


Book III.
England and Wales

WITH NOTES
FOR THE STUDENT
OF THE HISTORY OF
ENGLAND

London —
Edward Arnold

[All rights reserved]



PREFACE

THIS book is the third volume of ARNOLD'S HOME AND ABROAD READERS, of which the following is a complete list.

BOOK I.—*Glimpses of the Homeland.* 135 pages.
Price 10d.

First ideas of geography for very young readers. Conversational lessons descriptive of walks in town and country, and at the seaside.

BOOK II.—*Glimpses of the Globe.* 152 pages. Price 1s.

Simple lessons on some of the most interesting countries and nations in all parts of the world, beginning with British lands beyond the sea. The life of the people made the chief feature.

BOOK III.—*England and Wales* (with a little about her nearest neighbours). 200 pages. Price 1s. 3d.

Simply worded lessons on the physical features of the country and their connection with the industries and life of the people.

BOOK IV.—*The British Dominions.* 232 pages. Price 1s 6d.

The British Isles and Empire, the former treated as a unit, and the latter as an expansion of the former. Special attention to the "five nations," Britain, Canada, Australia, New Zealand, and South Africa.

BOOK V.—*The World's Great Powers—Present and Past.* 228 pages. Price 1s. 6d.

Sections on Britain as a World Power, France, Germany, Russia, Italy, Austria, the United States, and Japan; noting those distant parts of the world in the possession of the Great Powers. Shorter chapters on the other countries of Europe.

BOOK VI.—*The World's Trade and Traders.* 228 pages. Price 1s. 6d.

The chief divisions of the world. The countries of the world at present independent of the Great Powers regarded chiefly as markets for their commerce. Chapters on great commercial cities in all parts of the world, and on world journeys by land and sea. The whole forming a complete outline revision of the geography of the world, with special attention to the leading trading nations.

The books of this series do not pretend to deal with what is called "scientific" geography. The aims of the author in dealing with any given country are to draw attention to some of the chief physical characteristics, and to connect them with the life of the people; to encourage the pupil to read the map in an intelligent manner; to interest him a little in the history and modern position of the country under consideration; and generally to give him such information as may be of use to him in understanding the great political and commercial activities of the modern world.

CONTENTS

CHAPTER	PAGE	CHAPTER	PAGE
I. THE MAP OF ENGLAND AND WALES - - -	9	XX. A GREAT CHANGE -	99
II. BRITAIN AND ENGLAND	14	XXI. ENGLAND AS A GREAT WORKSHOP - -	105
III. THE EDGE OF THE LAND —I. - - - -	21	XXII. THE POTTERY DIS- TRICTS - - -	110
IV. THE EDGE OF THE LAND —II. - - - -	27	XXIII. THE COTTON TOWNS -	113
V. THE LIGHTING OF OUR COASTS - - -	32	XXIV. THE WOOLLEN TOWNS	119
VI. SOME INTERESTING IS- LANDS - - -	38	XXV. THE BLACK COUNTRY	124
VII. OUR COUNTIES - -	42	XXVI. TYNE, WEAR, AND TEES	129
VIII. THE SURFACE OF ENG- LAND AND WALES -	47	XXVII. OUR FISHERIES -	134
IX. OUR HIGHEST MOUNTAIN PEAK - - -	52	XXVIII. OUR FARM LANDS -	140
X. THE FENS AND THE BROADS - - -	56	XXIX. THE BRITISH ARMY -	146
XI. THE STONY HEART OF ENGLAND - - -	61	XXX. THE BRITISH NAVY -	149
XII. THE QUEEN OF ENGLISH LAKES - - -	64	XXXI. COUNTY TOWNS -	151
XIII. WEATHER AND CLIMATE	69	XXXII. HOLIDAY AND HEALTH TOWNS - - -	155
XIV. RIVERS OF ENGLAND AND WALES - - -	73	XXXIII. ENGLISH ROADS -	159
XV. FOREST LANDS - -	77	XXXIV. ENGLAND AS A TRADER	163
XVI. ROCKS AND CLAY - -	81	XXXV. OUR SEAPORTS - -	167
XVII. OUR COAL-FIELDS - -	87	XXXVI. TRAVELLING — THEN AND NOW - - -	173
XVIII. WELSH SLATE-QUARRIES	93	XXXVII. OUR RAILWAYS - -	177
XIX. POPULATION—CROWDED AND SCATTERED - -	96	XXXVIII. THE MOTHER CITY -	180
		XXXIX. FAIRS AND MARKETS -	184
		XL. OVER THE SCOTTISH BORDER - - -	188
		XLI. ACROSS THE IRISH SEA	193
		XLII. OVER THE ENGLISH CHANNEL AND THE NORTH SEA - -	196
		XLIII. OPEN EYES AND EARS	199

ENGLAND.

. . . View the ground's most gentle dimplement
(As if God's finger touched but did not press
In making England !), such an up and down
Of verdure,—nothing too much up or down,
A ripple of land ; such little hills the sky
Can stoop to tenderly and the wheatfields climb ;
Such nooks of valleys, lined with orchises,
Fed full of noises by invisible streams :
And open pastures, where you scarcely tell
White daisies from white dew.

E. B. Browning.

ARNOLD'S HOME AND ABROAD READERS

BOOK III.

CHAPTER I.—THE MAP OF ENGLAND AND WALES.

ON one of our school walls hangs a map of England and Wales. It is quite an old friend to all of us ; indeed, we are so much used to seeing it that the map has, perhaps, little meaning for us.

It shows the shape of our country, and it is full of names and marks of many kinds. The land is coloured like a piece of patchwork not very well done, and the sea is blue or green. And that is all.

So, at least, some of us may think, but if we do, we shall make a great mistake ; for if we learn to look at it in a proper way, the map will teach us many things worth knowing about the country in which we live.

In our geography lessons the map ought always to be before us. As we shall no doubt find, in

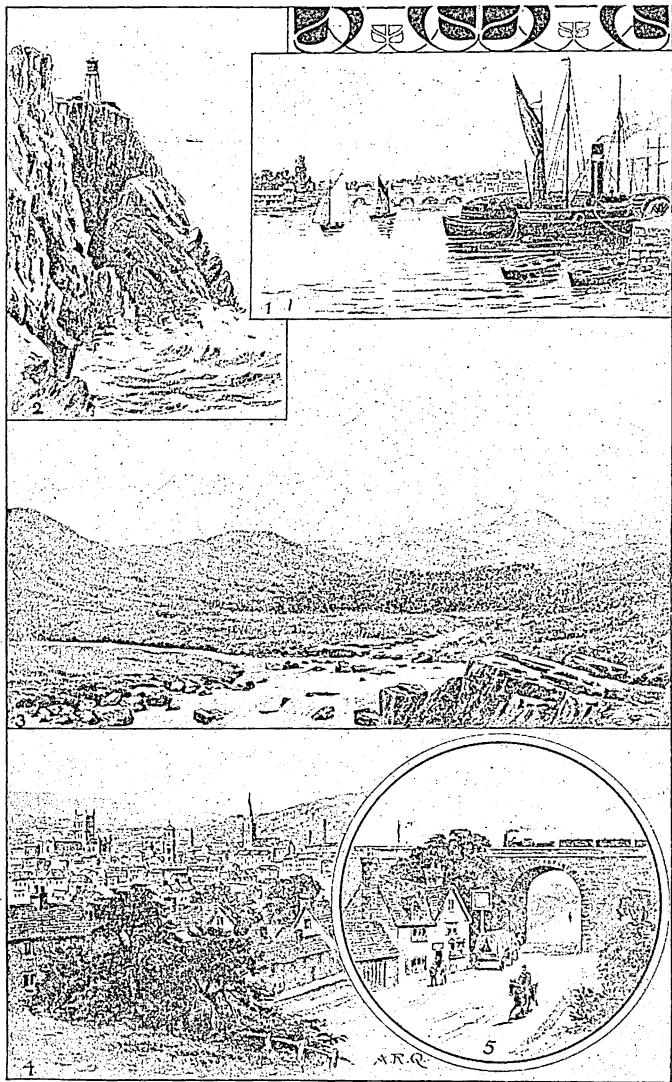
reading the chapters of this book, we cannot get very far without turning our eyes to the map. It must be our constant companion, or our lessons will be mere dry lists of names without much meaning or interest.

Suppose that we wish to fix in our minds the fact that the River Thames flows to the east and empties its waters into the North Sea, below the great city of London. Reading this from a book without looking at the map is quite useless. But a glance at the map soon puts things right.

There we see, in the lower right-hand corner, the wavy line that stands for the river; and we note the dark space which marks the position of London, the shape of the river-mouth, and the sea into which the river flows.

The names of the river, the city, and the sea are clearly marked; so that the map would have told us what we have learnt without any help from the book at all.

Now, let us find out the meaning of some of the colours and markings on the map. Here, for instance, is the blue or green colour, which stands for the sea. It ought to make us think of the restless waters which surround our island home; which cut us off from other lands; and which serve to protect us from enemies in the best possible way.



(1) RIVER MOUTH ; (2) ROCKY COAST ; (3) MOUNTAIN LAND ; (4) TOWN VIEW ; (5) A COUNTRY ROAD.

The patchwork colouring on the land shows the parts of the country called counties. They are not all of the same size and shape, as we can see very well. We shall learn more about them in a later chapter. At present it will be enough if we find out which of these counties we live in ourselves; for this is, of course, the county in which we take most interest.

Here is a simple, uneven line which marks the coast, or edge of the land. This brings to mind the tall, rocky cliffs with the foaming waves dashing against them; or the long, flat, sandy shore with its curling breakers. It reminds us, too, of the lighthouses which at night flash their warning lights across the dark waters and save many a fine ship from wreck, and many a sailor from a watery grave.

On the land we note the wavy lines which stand for the rivers. A little thought turns these lines into streams of water, now winding through green and quiet pastures; now tumbling over a rocky bed, and making all haste to the sea. On many of these rivers are boats and vessels of various kinds carrying goods backwards and forwards between the coast and the towns inland.

The dark shaded parts of the map show the higher parts of the country, where the land is piled up in great masses, called mountains.

The sides of these mountains are sometimes bare and bleak, sometimes wooded, or covered with grass or heather. On many of them sheep are fed, and sometimes their lower slopes are ploughed, and grow crops of various kinds.

The shading is heavier and closer in some parts of the map than in others. The darker shading shows the highest land. This will be found in the West and North-West.

Then we notice the dots and circles which mark the places where towns are to be found. Here is a very large one marked LONDON; and it ought to make us think of miles upon miles of streets, of busy, rushing traffic, of noise and bustle.

Here and there all over the map are many other dots. Some of them show the position of large, busy, smoky towns; others of quiet country towns where people have time to breathe and air which is worth breathing.

The different sizes of letters used for the names of towns on the map remind us that some are larger and contain more people than others.

Besides the wavy lines which show the rivers, there are other lines which cross some maps, and run in many ways. These stand for roads and railways; and many maps show a double line for a road and a crossed line for a railway.

Here, then, we can picture a broad road running through the open country; or there a railroad on which the engine thunders by, drawing its load of trucks or carriages from town to town; crossing rivers by means of bridges, and passing through hills or mountains by means of tunnels.

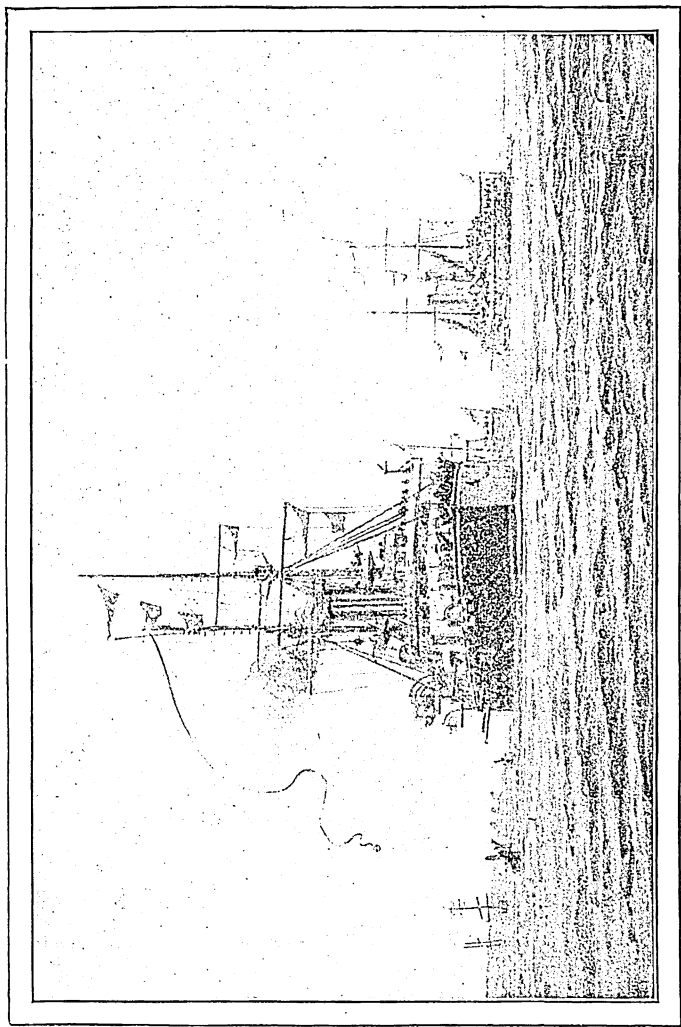
We have noted some of the chief things which a map shows to those who read it properly, and who try to make mind-pictures of the things for which the markings stand. We shall keep the map always before us, for, as we shall see, it has many another lesson to teach us.

CHAPTER II.—BRITAIN AND ENGLAND.

*"Rule, Britannia! Britannia, rule the waves!
Britons never will be slaves!"*

WE all know these lines quite well. We have sung them and heard them sung a great number of times. They come from one of our songs, and we know that Britannia, which is a poet's name for Britain, means our native land, and that the Britons are ourselves.

We know, too, that the British Empire is *our* Empire, the British Army *our* army, and that the British Navy is made up of *our* ships and men;



SHIPS OF THE BRITISH NAVY.

and it is by means of this navy that Britannia is to "rule the waves."

But we also answer to another name—our country is England, and we are the English. There seems to be something strange about this. We live in England and in Britain at the same time. We are English boys and girls, and we are also Britons. Let us try to find out how this can be.

A careful use of the map will help us. Look at a map of the British Isles. What does it show? Two large islands, and a great many smaller ones about which we need not trouble at the present moment.

The larger of the two islands, which lies to the right hand, is known as Great Britain. The smaller island to the left hand is Ireland. Great Britain and Ireland, with all the smaller islands lying near them, make up the British Isles.

Now let us take another step. Great Britain is divided into three parts of unequal size. The northern part is the country of Scotland. To the south are England and Wales, the latter lying to the west of England and facing Ireland. Taken in order of size, the three divisions of Great Britain are: (1) England, (2) Scotland, (3) Wales.

The British Isles, then, afford a home to the

English, Welsh, Scotch, and Irish, and all of these are Britons. When we speak of Britain we mean the British Isles. The British Army is made up of men from each division of these islands. The ships of the British Navy are manned by sailors drawn from each part. The British Empire includes the British Islands and all those countries over the sea which are peopled or ruled by Britons.

We see, then, that the names Britain and British have a wider meaning than the names England and English. We may be English, Welsh, Scotch, or Irish, yet all of us share in the name of Briton. It is a name which has been made famous by many a brave and wise Englishman, Welshman, Scotsman, and Irishman. We have, as one of our poets tells us, "One life, one flag, one fleet, one throne."

In this book we are going to learn something of that part of the British Isles to which the English specially belong. It is usual, however, to think of Wales along with England, and we shall do so here, because it is easier. Our subject, then, in the chapters of this book is England and Wales, and sometimes we shall use the former name to mean both countries.

"There's a land that bears a well-known name,
Though it is but a little spot."

So writes a poetess about England, naming two facts which we must always bear in mind.

England holds a high place among the great nations of the earth, and the British Empire is the largest in the world. But England and Wales together form a very small country indeed.

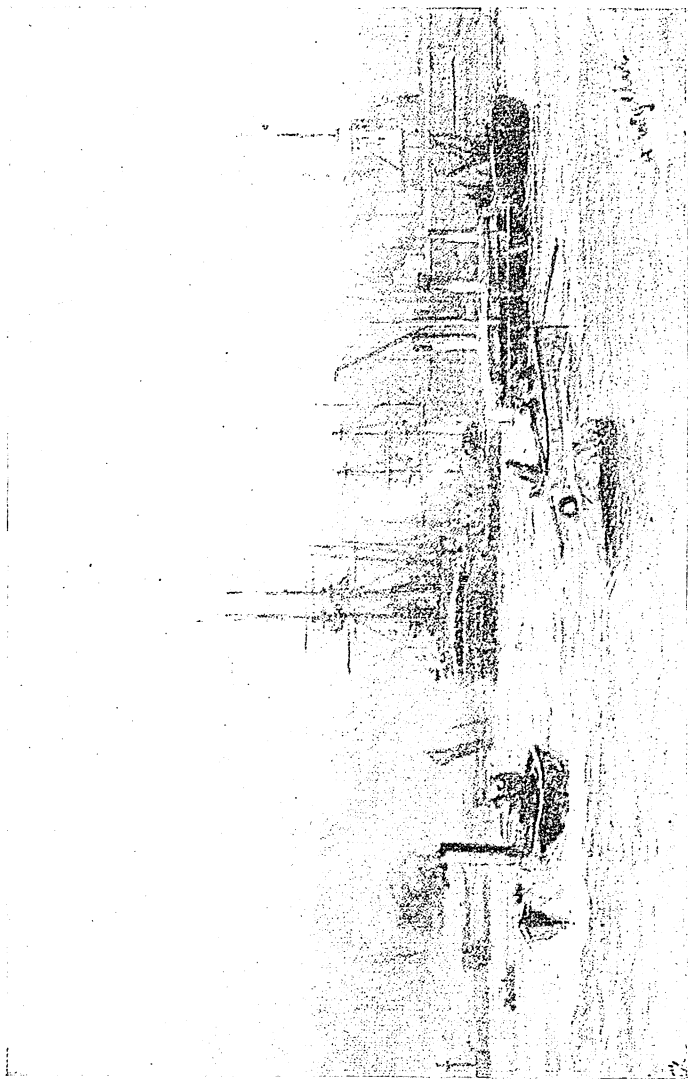
You may know a little about France ; at least, you know that there is such a country. Well, France is more than three times as large as England and Wales.

An important part of our Empire is India, the hot country which sends us tea and rice. Now, India might be cut up into seventeen parts each as large as England and Wales together.

We must try to remember this in all our geography lessons. It is a common thing for boys and girls to think that because England is their own country, and the chief land in the world to them, it is the largest or one of the largest ; besides, they would say, it has a page in the atlas and a map on the wall all to itself.

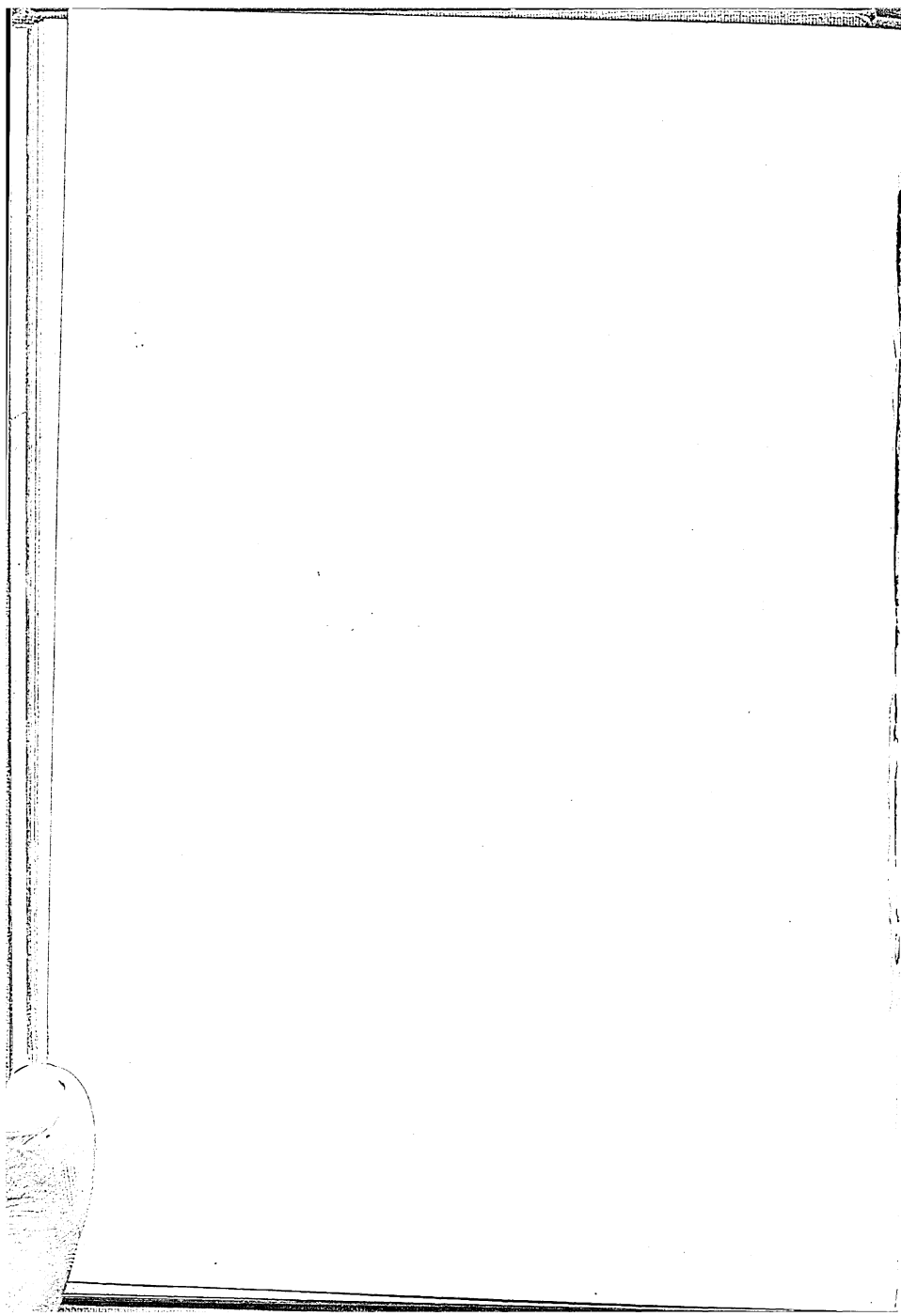
They are, of course, quite mistaken. England is great in name, and great in fame, but not great in size beside most other countries.

However, great size is not always, or even often, a sign of real greatness. A man may be very tall and very broad and stout, and yet have a very



PORTSMOUTH HARBOUR.

II. & A.R. III.



small mind ; and a country may look very large on a map of the world, and yet have no great name among the nations.

It all depends upon the stuff of which the people of a country are made. Brave, strong, and wise men and women make a country great if it is ever so small in size.

English men and women of past times have made England great. English men and women of to-day will keep her great if they do great deeds like those who have lived before them.

CHAPTER III.—THE EDGE OF THE LAND—I.

OUR map shows us the shape of England and Wales as it would appear if seen from above. It also shows the edge of the land, which we call the sea-coast.

Round the coast we can see many openings, some of which run far into the land. These openings make the coast-line much longer than it would be if the land next the sea were quite smooth and unbroken—in fact, nearly twice as long. Most of them are very useful, for they allow vessels to reach many parts of the land which are a good way from the open sea.

Rivers flow into these openings, and more than

one is the broad mouth of a large river. Such a river-mouth is called an *estuary*, and there are two good examples in the lower part of the map ; these are the Mouth of the Thames on the east and the Mouth of the Severn on the west.

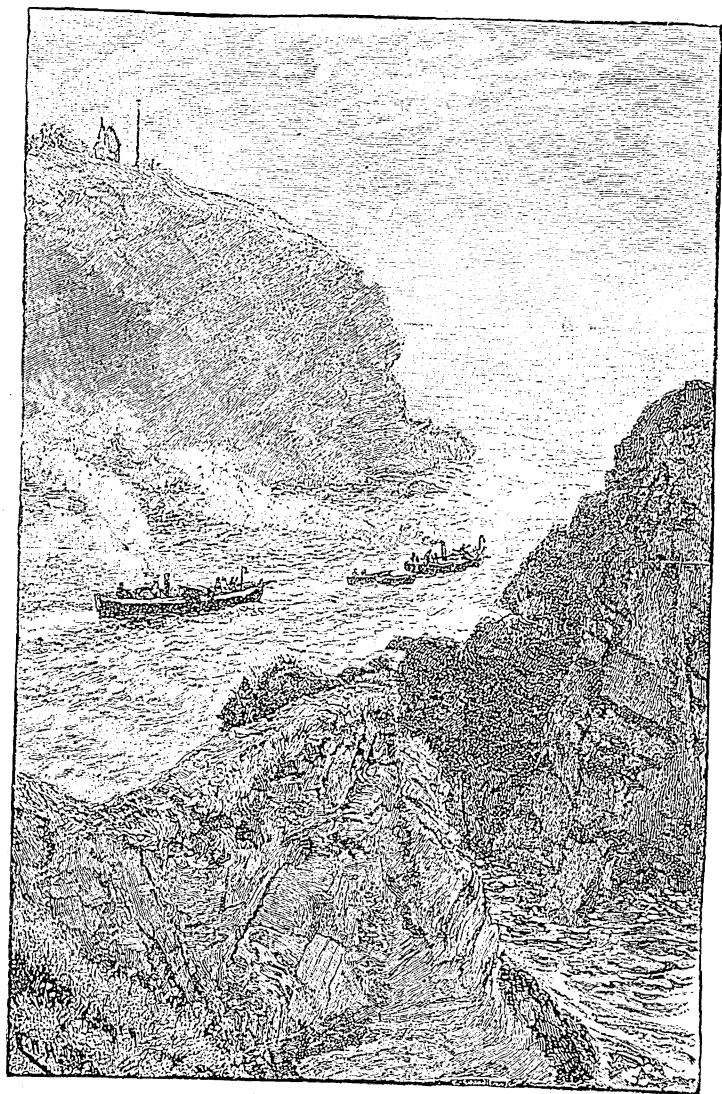
Others may be found by looking carefully at the map. Some openings have several rivers flowing into them ; a good example is the Wash on the east coast.

Our map shows only the larger openings in the coast-line. It would take a very large map indeed to show all the bays, coves, and creeks which are to be found around our shores.

And there are just as many capes or headlands, pieces of land running out into the sea, but the map shows only the most striking. A few of these we ought to remember — for example, Lowestoft Ness in Suffolk, the most easterly ; Land's End in Cornwall, the most westerly ; Lizard Head, also in Cornwall, the most southerly.

Notice that none of them are called capes. Most of them are heads, some are bills, a few on the west are points ; and there are some on the east coast which go by the name of ness, which means *nose*.

Our map does not tell us whether the coast at a certain place is high and rocky or low and sandy ;



A ROCKY COAST ; WITH STEAM FISHING-BOATS LEAVING THE MOUTH OF
A RIVER.

nor does it give us any idea of the kind of rocks, whether sandstone, chalk, or limestone, to be found at various parts. Yet this is all very full of interest, and worth a little thought. Let us begin at the north-east corner, and gain some idea of the nature of our coast.

Our first section of coast stretches from the town of Berwick to Flamborough Head in Yorkshire. This is in many parts high and rocky. In some places the rocks are of limestone, in others of brown sandstone; and to the north from Flamborough Head there is a line of chalk cliffs. In this section the sea has worn numberless bays in the coast; and there are several large and busy ports at the mouths of the rivers.

Our next section begins at Flamborough Head and ends at the mouth of the Thames. On the whole this part of the coast is low and flat, but there are cliffs here and there. Between Flamborough Head and Spurn Head there are low cliffs, chiefly of clay; and after passing the low shores of Lincoln and the Wash, we come to the higher coast of Norfolk; here there are some cliffs of red sandstone and chalk arranged in layers.

When we turn southward we find that the shores become lower and lower; in Suffolk and Essex they are little more than mud flats. There

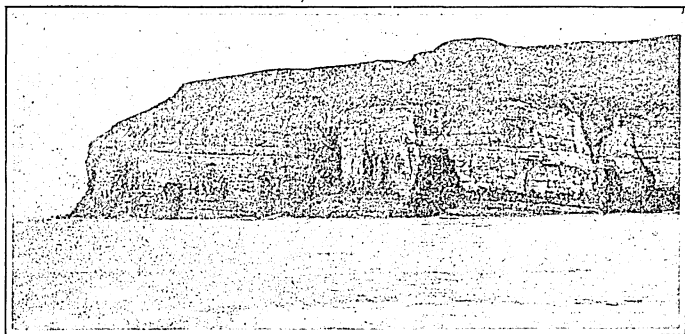


Photo by

W. Jerome Harrison.

THE CHALK CLIFFS OF FLAMBOROUGH HEAD.

are not many ports in this section, for there are no good harbours.

Off Yarmouth, the herring town, there are sandbanks which run along in the same way as the coast; and between these banks and the shore vessels may find safety in stormy weather. This refuge is known as Yarmouth Roads or Roadstead, because here the ships may *ride* at anchor.

Our next coast division stretches from the mouth of the Thames a little way past Beachy Head. In this section we have many tall cliffs of gleaming white chalk except near Dungeness, which is low and made of clay, and in a few other places. Off the east coast of Kent there is another roadstead, like that off Yarmouth, known as The Downs. This is shut in by the dangerous Good-

win Sands, where "the carcasses of many a tall ship lie buried."

The middle part of the south coast is, on the whole, not very high, the cliffs being mostly of clay; but the chalk crops out here and there as in the south and west of the Isle of Wight.

Our next section of coast is that of the peninsula of Cornwall and Devon. Here we have tall, rocky cliffs of great hardness; many of them are of granite, the stone which is often used for road-making because it will not readily wear away.

In this part of the coast there are many fine harbours, but not many large ports, if we leave out Plymouth; the reason for this we shall find out in a later chapter.

Both shores of the Bristol Channel are low and sandy, but there are some large ports on the South Wales side. The coast of Wales is in many parts like that of Cornwall, high and rocky, with many coves and creeks and headlands.

But when we pass Great Ormes Head in the North of Wales we find the coast is low and made of clay or sand until we reach Cumberland. Here we have in places tall cliffs of hard sandstone; but the coast sinks again towards the north, and is, on the whole, low and sandy on the southern side of the opening known as the Solway Firth.

It is in the rocky coasts that we often find the

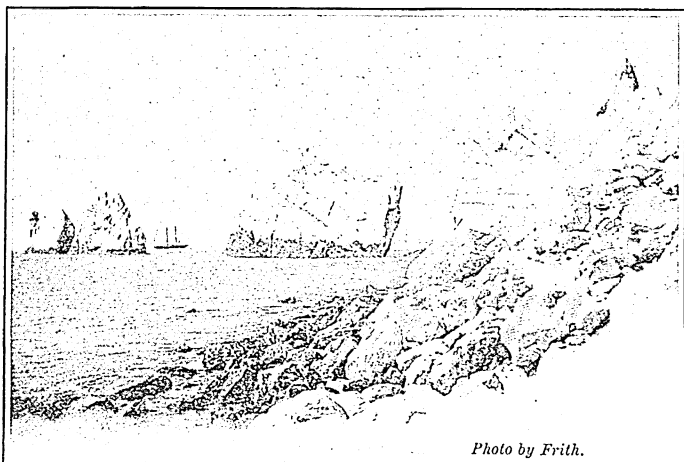


Photo by Frith.

THE NEEDLES, ISLE OF WIGHT.

fine broad harbours which can be used as ports ; but, as a rule, our chief ports are not to be found on the rocky coasts. We must look for a reason for this in later chapters of this book.

CHAPTER IV.—THE EDGE OF THE
LAND—II.

TAKE up a handful of dry sand brought from the seashore, and you will find that it is not easy to hold it. The grains are so small that they slip easily through the fingers.

Look at a few grains with a magnifying glass. You will then see that each grain looks like a pebble or a piece of rock, which, in fact, it is ; for sand is, after all, only powdered rock.

Of what does this handful of sand remind you ? Of a happy, glorious day at the seaside, perhaps. You can close your eyes and see again the long, yellow, sandy beach with the tall, brown cliffs behind it ; and in front the restless, foaming sea.

The cliffs are firm, strong, and steady. The sand, which lies out of reach of the water, is soft, and your feet sink down when you try to walk upon it. A strong wind can raise it and form a whirling cloud.

But this shifting sand was once firm, sturdy rock. The winds and rain, the frosts of winter, the sun of summer, and the ceaseless dash of the waves have all helped to wear down and break up the rocks ; first into great boulders, then into gravel or shingle ; and lastly into fine, pale-yellow sand.

This destroying work goes on all the year round. Little by little certain parts of our coasts are being worn away by the action of air and sea. Many years ago towns stood on the coast of Yorkshire which now lie beneath the waters of the North Sea. And on some parts of our sea-

coast we find tall rocks some distance away from the cliffs of which they once formed a part.

Of course, the rate at which the cliffs are worn away at any place depends upon the kind of coast. Cliffs formed of clay and gravel (*see* Chapter III.) are broken down more readily than the cliffs of sandstone, limestone, and chalk. Hardest of all are the granite cliffs of Cornwall and Wales; but the destroying work goes steadily on year after year, no matter how hard the rocks.

We see, then, how the sea wears away the edge of the land; but in some places the land gains on the sea.

Find out on the map the towns of Boston and King's Lynn, which stand near the shores of the Wash.

At one time they were both seaport towns, and carried on a large shipping trade. Now they can no longer be counted among our chief ports, for their harbours have been partly filled up with sand.

Year after year the sea has washed up into this corner of the coast a great deal of sand, which it has brought from places farther to the north. So the sea sometimes takes from one part of the coast to give back to another.

There are other parts of the coast where the land gains on the water; and towns which were

once near the shore now stand at some distance from the sea. Such a town is Winchelsea on the south coast, a little to the east of Hastings. This place was once a busy port; now it stands about two miles from the sea.

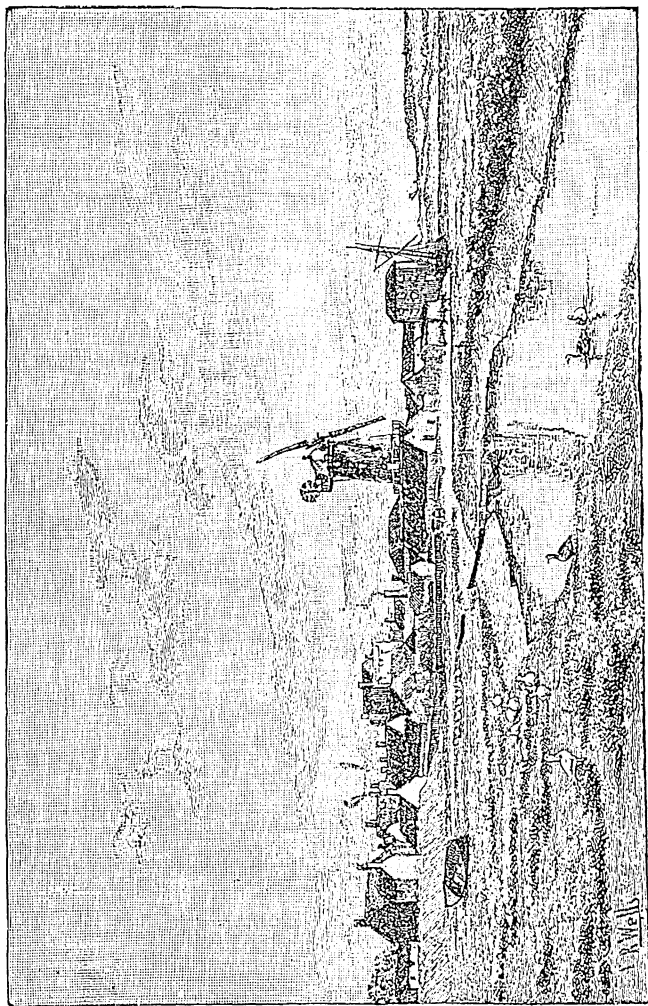
On a steep, rocky coast the tide comes in very slowly. The water creeps up inch by inch, covers first the strip of beach or shingle at the foot of the rocks, and then mounts slowly up the face of the cliff.

But on a wide, flat coast, where the land slopes gently down to the water, it often comes in with a rush, and at great speed. In the Solway Firth the tide comes in very quickly. The water rushes across the sandy flats with the speed of a galloping horse.

The tide rises to a great height in the Bristol Channel and the mouth of the Severn, and the water rushes up at great speed. This is caused by the shape of the opening, which is rather like a funnel, as you can see on the map.

The rising tide is checked in its flow by the sides of the channel, and so the water is raised to a great height. On it rushes up the mouth of the Severn, and may become a source of danger to small vessels.

A glance at the map will show that the greatest port in this part of the country—namely, Bristol



AN EAST-COAST SCENE (OLEY-NEXT-THE-SEA).

—is not on the shore of the channel, but lies out of reach of the rushing tide-wave.

Twice in each twenty-four hours the tide-wave comes rushing up the English Channel and through the Strait of Dover. Another tide-wave, coming from the north, meets this one off the mouth of the Thames; and the two join and raise the waters of this river many miles from its mouth. To this high tide London partly owes its place as our greatest seaport.

CHAPTER V.—THE LIGHTING OF OUR COASTS.

“Our brows are bound with spindrift, and the weed is on our knees;

Our loins are battered 'neath us, by the swinging, smoking seas.

From reef and rock and skerry—over headland, ness and voe—

The Coastwise Lights of England watch the ships of England go.”

THE poet in these lines is thinking chiefly of the tall lighthouses which are to be found in many places on our coasts. But there are other useful coast-lights besides these—lightships, beacons, and buoys bearing lamps.

They all serve as lamps to light the coast, and

to help the sailor to find his way from point to point. They also tell him when his ship is near dangerous rocks, or sandbanks ; and some of them show him where he will find a harbour in which he could get shelter from a storm.

Lighthouses are, as a rule, shaped like a tree without branches, being broader at the bottom than at the top. Their sides are quite smooth, so that there is nothing on them to catch the wind.

The lower part of the tower is solid, and built on a strong foundation in the rock. At the top is the room with glass sides, from which shines the light ; in some lighthouses there is a large oil-lamp, in others, gas or electric light.

Sometimes the lighthouse is built on the coast itself, as a rule on a point or headland. Sometimes it stands on a rock or islet near the shore. A few are built on rocks several miles out at sea. A large number of harbours have two lighthouses, one at each side of the entrance.

A winding stair within the tower leads from one room to another. The lamp is cleaned, trimmed, and lighted by the lighthouse-keepers. If the lighthouse stands on shore the keepers sometimes live in houses not far away. If it stands on a rock some distance from the coast, the keepers have rooms in the tower itself.

About fourteen miles south of Plymouth there is a low reef of dangerous rocks which has been the cause of many a wreck. This rocky reef is known as the Eddystone ; upon it stands a strong lighthouse with a light which flashes out once every half-minute. This powerful light can be seen many miles out at sea.

The present Eddystone Lighthouse is the fourth that has stood at this spot. The first to be placed there was built by a man named Winstanley. One day in November, 1703, he crossed from Plymouth to the lighthouse to carry out some repairs.

A storm arose, and he could not get back that night. The next morning there was no trace of the lighthouse to be seen. It had been swept away by the storm, and with it both the builder and the keepers.

The next lighthouse was built by a man named Rudyard, and was made of wood. It was very strong and cleverly made ; but one day it caught fire and was burnt down.

A third lighthouse, built of stone, was now put up by an engineer called Smeaton. This stood nearly one hundred years, and was then removed and set up on Plymouth Hoe. Then the fourth lighthouse, a much stronger building, was raised on the Eddystone.

On St. Catherine's Point, in the south of the Isle of Wight, there is a lighthouse with a very strong electric lamp. This is made to show a flash once every half-minute.

When it is shining people standing near cannot look at it with the naked eye, for it would blind them; black spectacles must be used. When the light cannot be seen out at sea because of dense fog, a very loud and piercing fog-signal is sounded once a minute; but it takes a very thick fog indeed to make this strong light useless.

On parts of our coasts, where there are mud-flats and sand-banks, it would not be possible to build a lighthouse.

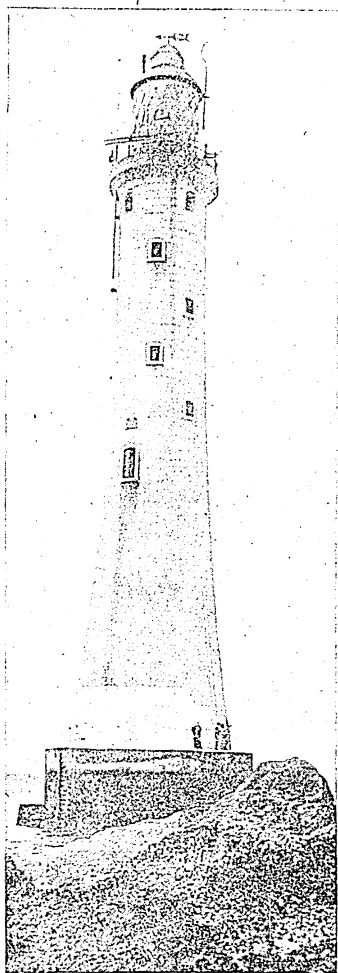
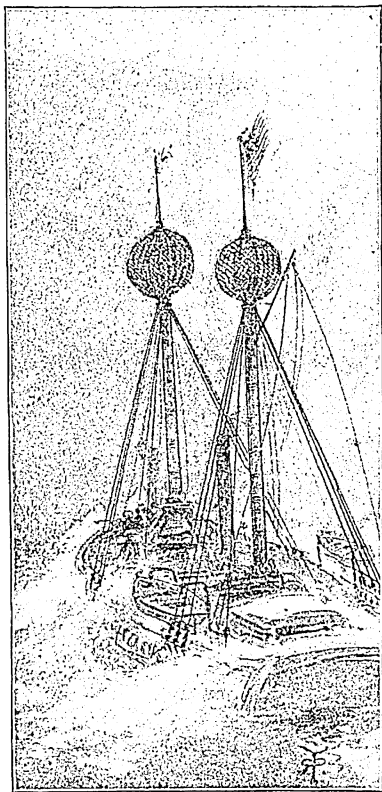


Photo by Frith.

EDDYSTONE LIGHTHOUSE.

In such places as these lightships are often moored.

Those of the newest pattern are strongly built of wood and covered with metal plates. They are moored to the bottom of the sea by means of strong chains and very heavy anchors.



A LIGHTSHIP.

On the lightship are strong steel masts, each topped by a lantern with a steel frame. This frame is hung in such a way that, however much the ship may roll, the lantern still remains upright.

The lantern has strong oil-lamps and very bright reflectors. A well-known lightship is that at the Nore, near the mouth

of the Thames. There are also several near the Goodwin Sands off the coast of Kent.

On the coast itself, or on small rocks near the coast, beacons are often placed. These are built sometimes of wood, sometimes of iron ; each consists of a strong open framework with an oil or gas lantern at the top.

On some parts of the coast the beacon lantern is an iron cage which is filled with things that burn long and brightly, and are lighted when wanted.

Another plan for coast-lighting is to use lighted buoys. Some of these have a gas-lamp on the top. The buoy is hollow and filled with a supply of gas. This lasts in some cases for three or four months, the light burning by day and night.

The two sides of the deep channel through the shallow waters off the coast of Essex, by which ships from the North reach the Thames, are marked for many miles by buoys of this kind.



CHAPTER VI.—SOME INTERESTING
ISLANDS.

THERE are, near our coasts, only three islands which at once strike the eye on looking at the map. These are the Isle of Man, Anglesey, and the Isle of Wight.

The people of the Isle of Man, who are known as the Manx, call their island *Mannin*. This name is said to mean "the middle island." The name is a very good one ; for the Isle of Man lies almost in the middle of the Irish Sea. From the top of a mountain in the north of the island we can, on a clear day, see the coast of each of the four countries round about.

Many people visit the Isle of Man because of its beautiful scenery. It has many high mountains, deep valleys, pretty glens, and beautiful streams and waterfalls ; it also has, on the whole, warmer weather than places in the middle of England or on the east coast. Its coast is very rocky and dangerous for ships ; there are several lighthouses on or near its shores.

The towns on the island are nearly all on the coast, and the three which contain most people are Douglas, Ramsey, and Peel. Many people go to spend a summer holiday at these towns.

To the south-east of Peel lies a low hill or mound called Tynwald Hill. In July of each year the Governor of Man with other officers goes to this mound ; and here the laws made for the island by its own little Parliament, called the

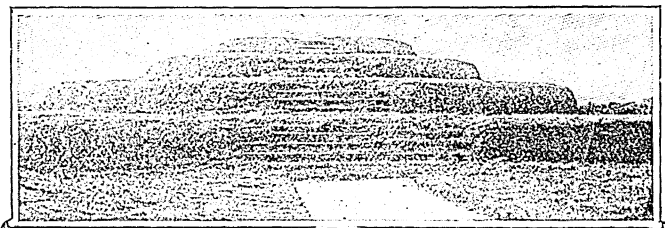


Photo by Frith.



TYNWALD HILL, ISLE OF MAN.

House of Keys, are read out to crowds of people.

The Island of Anglesey lies to the north-west of Wales. Its name means "isle of the Angles," but the Welsh of the olden days called it Mona, the "mother of Wales."

The island was the last home of the Druids, who were the priests, teachers, and judges of the Ancient Britons. Here and there you will find traces of them to this day, for there are in various parts of the island many Druid altars, called "cromlechs." Each of these consists of a few

stones standing on end, and having another stone laid across them.

The Romans made up their minds to kill all the Druids, and marched an army through North Wales to the narrow channel now known as the Menai Strait. The army waited at Carnarvon till rough boats could be put together in which the soldiers could be carried across.

On the other side stood armed men ready to meet the Romans. The Druids stood near them, dressed in their long flowing robes and hoods of white; and with uplifted arms they prayed for victory over their foes. The Romans, brave as they were, shook with fear, but only for a few moments. On they came, and in the fearful fight which followed none of the Druids or their people were spared.

To-day Anglesey is a Welsh county, and the strait which was crossed by the Roman soldiers is spanned by a fine railway-bridge, through which run the trains which carry people bound for Ireland. We say "through" the bridge because it is built in the form of a kind of pipe or tube, and it is called the Britannia Tubular Bridge. The train runs on across the island over another strait to Holy Isle, and stops at Holyhead. Here the boats start for the other side of the Irish Sea.

There is another Holy Isle, which lies off the

coast of Northumberland, and is also known as Lindisfarne.

In the olden days a number of monks who came from Scotland lived on this island. Here they built a monastery, and the ruins of their church may still be seen. These men were clever scholars, and people came from all parts of England, and even from other lands across the sea, to be taught by them.

One of the most famous was Cuthbert, who for some years lived by himself in a kind of pit scooped out of the rock on one of the smaller islands near Lindisfarne.

We turn next to the south coast, where we find the Isle of Wight. This island is cut off from the mainland by two channels known as the Solent and Spithead. From east to west runs a chalk ridge, which at the western end stretches out into the sea and forms several sharp-backed rocks known as The Needles. On the outermost of these rocks stands The Needles Lighthouse.

There are white chalk cliffs on the south coast of the island ; and here and there these cliffs are cut by small streams which form breaks in the coast known as *chines*.

Many of these openings in the cliff are of fairy-like beauty. In fact, the whole island is well-

known as one of the most beautiful parts of England. It has a very mild climate, and is a favourite place for holiday-makers.

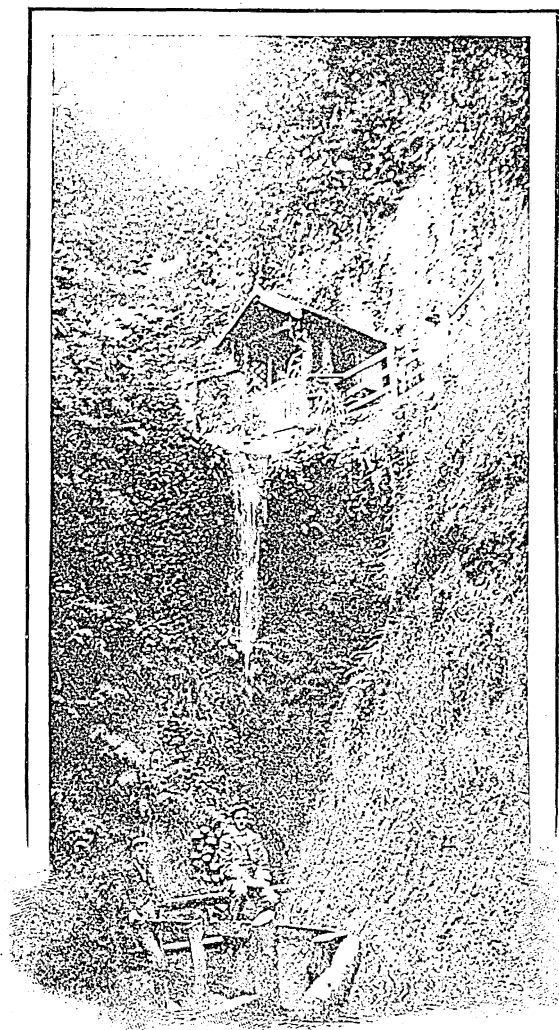
Most people travelling from the mainland cross to Ryde or Cowes, which are both on the north coast. Not far from Cowes is Osborne House, which was Queen Victoria's seaside home for many years ; here she died in 1901. King Edward made a gift of the house and grounds to the nation ; and here a college was started for boys who wish to be trained to become officers in the British navy.

The largest town in the island is Newport, in the north. Not far from this town stands Carisbrooke Castle. In this castle Charles I., the King of England who was beheaded, was for a short time imprisoned.

CHAPTER VII.—OUR COUNTIES.

WITH the help of our coloured map of England and Wales, let us see what we can find out about the English and Welsh counties. The map, at first sight, looks like a very hard puzzle ; but it will tell us a few interesting things and remind us of others before we leave it.

There are, in all, fifty-two coloured patches in



SHANKLIN CHINE.

England and Wales together ; to find this out is a matter of simple counting.

Let us draw a straight line from the head of the Dee estuary to the mouth of the River Taff, near the busy town of Cardiff.

This line will cut off the Welsh counties very well, though a few of them will overlap to the right. Now it is an easy matter to find out how many Welsh counties there are, and then, by subtraction, how many English counties. One Welsh county, Anglesey, is an island.

You may already have found out from the colours of the map that the Isle of Wight is part of Hants, which is the shorter name given to the county of Hampshire.

But the map cannot very well tell us that the Isle of Man is neither a county nor part of a county. It is under the same King as England and Wales ; but it makes laws for itself in its own Parliament, and is quite separate from England and Wales.

It is an interesting exercise to find out from the map the names of the counties which border on the sea. Then find out the number of these, and by a simple exercise in subtraction you will be able to tell also the number of inland counties.

Some of the counties have long seaboard, several of them forming peninsulas, as the map

shows us very clearly. One county has two separate seaboard.

A few have only a small part of their boundary next the sea, one of them just touching it for a short distance. These you can find out and name for yourselves.

We can scarcely help seeing that the counties are not all of the same size; and it does not take long to find out which is the largest in England and Wales. A little care, and we find the smallest of all, not far from the broad opening known as the Wash.

The map will help us somewhat if we are asked to name the county which contains most people. We must look for those which have the largest towns, and the greatest number of them. When we have looked at the map with care, we shall not be surprised to learn that Lancashire contains more people than any other of the fifty-two counties.

Now let us see how our counties are divided from each other. In some cases the dividing-line is a river; and it is useful to write down the names of those English and Welsh rivers which divide, or help to divide, one county from another.

The Thames differs from the Severn in this respect. The former river forms part of the boundary of a number of counties; but the latter

flows right through the middle of some of the western counties. One of the northern counties of England has a river both on the north and on the south.

Most of the county boundaries, however, are shown on the map by dotted lines. These lines were fixed a very long time ago, when there were more woods, forests, and swamps in the land than there are to-day ; and very often a piece of forest land or a swamp or marsh became the dividing-line.

Since that time most of our forests have been cleared away, and many swamps and marshes have been drained or made dry, and therefore useful ; so that you would, in very many cases, not find anything to show where one county ends and another begins.

And in many places you could stand with one foot in one county and the other in the one lying next to it. In some places the dividing-line runs along a stream too small to be shown in our map.

Who cut up our country into counties, and when was it done ? This is a very hard question to answer, and many very wise people have puzzled themselves over it.

We cannot point to one time and one person and say that on a certain day so many years ago a certain man divided England and Wales into

fifty-two counties. It took a long time to do the work, and many people had a share in it; and King Alfred the Great was one of them.

CHAPTER VIII.—THE SURFACE OF ENGLAND AND WALES.

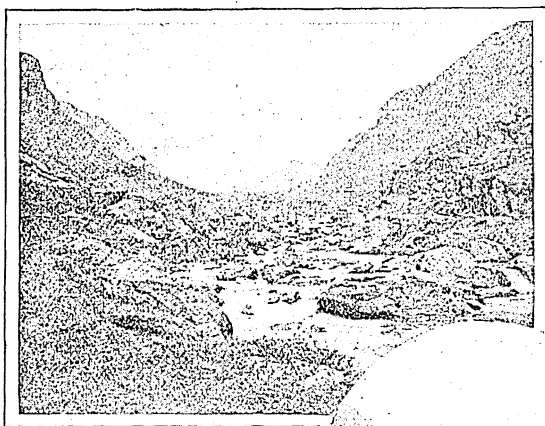
IF we look at the markings on our map, they will teach us many things about the heights and hollows of England and Wales.

Certain marks show where the high lands lie; and where these marks are not to be found we know that the land in these places is either level or nearly level. In some maps the mountains and hills are shown by shading more or less dark; in others thick black or blue lines are used, and the positions of the highest points are shown by means of small rings.

From the wavy lines which stand for the rivers we can learn a great deal about the surface of the land, as we shall see. We can find out the slope of the land in any part from a study of the running water; for water must always flow down the slope to the lowest level it can reach.

Let us first examine the markings on our map which show where the mountains lie.

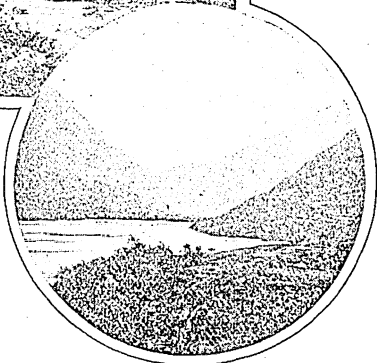
We get a general idea from a quick glance at the map that England and Wales is, on the



PASS
AND
LAKE
OF
LLANBERIS.

Photos by W. Jerome Harrison.

whole, not a very high land. Wales has more mountains than England; and in the latter country the only really high lands are to be found in the north and the north-west.



The mountains of the north-west are known as the Cumbrian Group. If we look closely, we shall no doubt find several names of peaks or summits with numbers, showing their height in feet above the level of the sea.

The highest is Scafell, or Scafell Pike. This is rather more than half a mile high, and it seems a great height. But there are mountains

in other parts of the world six, seven, eight, and even nine times as high as this ; so that when we say that Scafell is the highest peak in England, we must not forget that it is not very high, after all.

From the north of England to the middle stretches a high ridge of land known as the Pennine Chain—the backbone of England. North Wales has its mountains, with Snowdon, the highest mountain in England and Wales. There are also mountains in South Wales and ridges of high land in Devon and Cornwall.

We have now noted the highest parts of England and Wales. All except the southern end of the Pennine Chain lie to the west of a line drawn from Berwick in the north-east to St. Alban's Head in Dorset.

This line divides England and Wales into two parts, the higher to the left, the lower to the right.

Nearly all the level lands, or plains, lie to the east of this dividing-line. We must not, however, think that these plains are quite flat.

Each has a slope in some direction, as we can see if we look for the way in which the rivers flow. Thus the Plain of York slopes towards the south-east ; the Cheshire Plain to the north-west ; the Great Eastern Plain,

which lies round about the Wash, to the north-east.

Not only does each plain slope in some way, but each is also crossed by ridges of higher ground; and the position of these ridges may be found by looking at the rivers.

These ridges of land divide the river districts, or basins, from each other. They are known as watersheds, or water-partings. If we remember this, we shall be able to think of the eastern part of England, not as quite flat, but as rising into higher ground between the various streams.

In many cases the higher ground has been chosen for building towns and cities, and this is always better for the health of the place. The great city of Birmingham seems from the map to lie very low in the centre of the Midland Plain. But it really stands at a good height above the sea, and is a very healthy city.

On page 51 we have a map of England and Wales which shows some of the watersheds by means of dotted lines. It divides the country into a number of river districts or basins.

There is one dotted line on this map which is heavier than the others. It shows the position of the chief watershed. This forms the dividing-line between the streams which flow to the east and those which flow to the west.



We see how it runs from the Cheviot Hills, along the Pennines, and then crosses the country to the River Avon.

After a break it runs along the Cotswold Hills, and then forms two branches, one going east to Kent, and the other west to Cornwall.

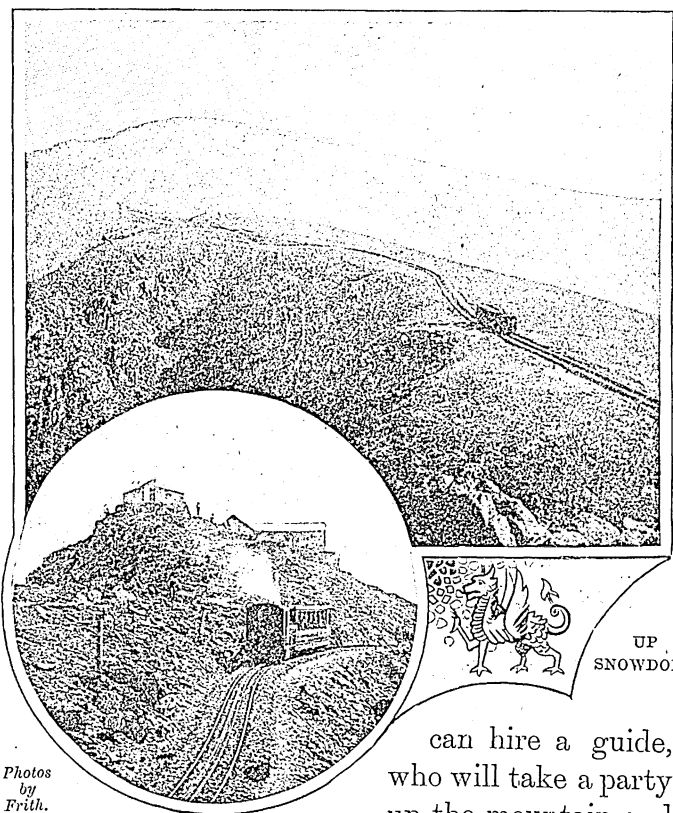
CHAPTER IX.—OUR HIGHEST MOUNTAIN-PEAK.

IN the middle of the Welsh county of Carnarvon there are several high mountain-ridges. They stretch out like the spokes of a wheel from the huge mountain-mass of Snowdon.

The deep valleys between these ridges have very steep sides, and in most of them there are one or more tarns, or mountain-lakes. There are some larger lakes on the border of the Snowdon district, where we can get some of the grandest views in our country.

North-West Wales is one of our "holiday districts." Numbers of people from all parts of the land come here during the summer season. Many of the visitors set out to climb to the top of Snowdon.

There are four paths to the top of the mountain; but that generally taken begins at Llanberis, which lies to the north-west. Here the visitor



Photos
by
Frith.

can hire a guide, who will take a party up the mountain and show them how to keep clear of the dangerous parts; and he also points out anything worth noting on the way.

In fine weather the climb up the mountain is not a very hard task; but it has its dangers when there is a strong wind.

Sometimes a stiff breeze will blow up rain-clouds from the sea, and cover the mountain with a thick mist. Then there is great danger even for the guides and those who know the paths; for anyone who wanders from the beaten track may slip down the steep side of one of the "cwms," or chasms, and be killed.

The storms on the mountain are not without their beauty. A traveller, who had set out with a party on a moonlight night to climb one of the peaks near Snowdon, thus describes a sudden storm. The travellers had been enjoying a backward view from a high knoll, and now turned round to continue their climb:

"We made our way slowly upwards. What was that? We started and trembled. There it was again! Had the heavens opened?

"Yes, long enough for us to see the whole scene changed into a sheet of pale-blue light; long enough for us to see Snowdon towering up black as ink with every crest and crag cut clearly out against the lightning glare. As suddenly all was darkness again. Another moment and a peal of thunder crashed upon our ears.

"We heard it echo round the hills, heard it leap from Snowdon across the gulf towards us; then it crashed full upon the peak overhead, rolled along from crag to crag, and died away over the dreary downs.

"No sooner had the roar of the thunder died away than the blue glare filled the sky once more. By this time we were wet to the skin by the rain that followed the first outburst of the storm; blinded by the flashes of lightning; and stunned by the roar of the thunder."

It is possible to reach the summit of Snowdon on the backs of small ponies, which are often hired by ladies. A still easier way is to travel by the mountain railway.

This line begins at Llanberis, and follows a fairly direct course to the top of the mountain. The journey takes rather less than an hour.

The engine is fitted underneath with four cog-wheels; these take a firm grip of the teeth on a steel rack laid between the rails. The whole train can readily be brought to a standstill; and the engine is always placed at the lower end, whether the train is running up or down.

On the way up the mountain the traveller gains many fine views, which become wider as he gets higher. Sometimes tourists sleep all night in a hut on the top, and get up early to see the sunrise.

On a clear morning there is a grand view to the north and west. Away to the north lie the peaks of Cumberland and Westmorland. On the left hand are the blue waters of the Irish Sea

and St. George's Channel. The Isle of Man, too, can be clearly seen.

Nearer home is the narrow Menai Strait, crossed by its two bridges. Southward and eastward there are fine views of the other rocky peaks of North Wales.

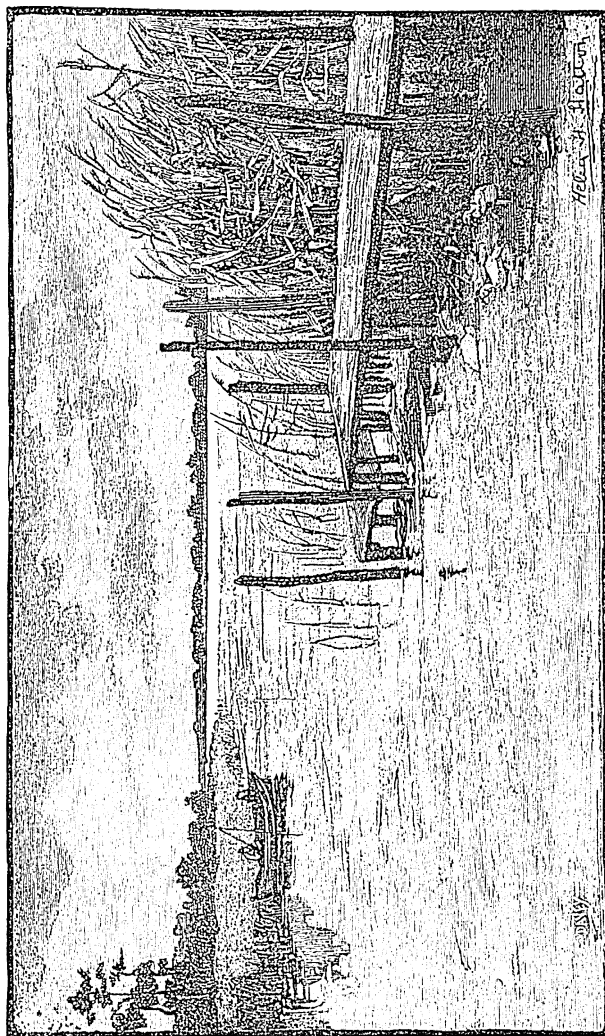
It was in the rugged Snowdon district that the Welsh held out for a long time against the army of King Edward I. of England.

They knew the country well, while their foes were strangers to the place, and found it most difficult to carry on the war; and among the princes of Wales, Llewellyn, who ruled the Snowdon district, was the last to give in.

CHAPTER X.—THE FENS AND THE BROADS.

MANY of us have read in our history books of the famous champion Hereward the Wake. He lived at the time when King William the Conqueror was bringing the whole of England little by little under his rule.

Hereward, with a large party of English, held out for a long time against the Normans. They would not take William as their King, although he had won the great fight near Hastings on the south coast.



ON THE BROADS.

They fixed their camp in the Isle of Ely. This was a long, low mound about seven miles long by four miles broad. At that time it had swamps or marshes round it, and was really an island, though, as we can see from the map, Ely is some distance from the sea.

Here for a long time the English held out, where—

“The east winds blow,
And from the marsh lands, drifting slow,
The sea-fog comes with evermore
The wave-wash of a lonely shore.”

There was plenty of fish in the rivers and pools of the fens, or marshes, and among the reeds a large number of water-fowl. And from the country round about came supplies of wheat and rye to the brave defenders of the camp at Ely.

There were other islands besides that of Ely among the Fens, as the whole district round the Wash was called; but at the present day we should look for them in vain. For the Fen Country has nearly all been drained, and now contains some of the richest and best farm lands in England.

Here and there are pieces of land which have not been drained. These show us what the whole of the wide district near the Wash must have been like in the olden days.

There are slow, winding rivers, thick beds of sedge and bulrushes, with here and there a peasant's cottage, near which feed herds of geese. The scenery is flat and dreary, the country, for the most part, desolate and lonely.

The draining of the marsh land has been carried on for many years. Land which once lay under a few feet of water now grows crops of wheat and rye.

The water has been run off into ditches, which take the place of the hedges found in other parts of the country. From these ditches it runs into wider channels or canals called "lodes," and thence into the rivers. There are few trees, no hollows, no hills, and only a few low mounds rise here and there.

Against the low horizon may be seen many wind-mills, which remind the traveller of Holland on the other side of the North Sea. "A calm quiet reigns over the whole place; and even in springtime and early summer it is only the feeble song of the reed-sparrow that breaks the silence."

The mention of Holland reminds us that this part of England is like that country in another way. There are a large number of dykes or banks on the coast, which have been raised to keep the sea from flooding the land. Even

the rivers have often to be banked up on either side to keep their waters from the pastures and corn lands.

Eastward from the Fens, in Norfolk and Suffolk, is the district known as the Broads, from the large number of broad lakes to be found there.

These lakes have no steep, rocky sides like some of those in northern England and Wales; they are wide, shallow pieces of water drained by a large number of rivers, which flow to the North Sea.

Here and there on the Broads, among the reeds and rushes, are found a large number of water-birds. And the waters of the lakes and rivers contain plenty of fish.

The district is a favourite one for the sportsman with his gun and the angler with his rod. They sail about for days or even weeks in yachts, or in large sailing barges known as wherries.

At night the larger boats are moored near the edge of the lake or the bank of the river, and the travellers spend the night in them.

It is possible to travel for a distance of about two hundred miles by river and lake. The scenery is, of course, very flat, but it has a beauty of its own.

Here are wide, green pasture lands, quiet streams and lakes, perfect peace and quietness,

and fine, fresh air; and it is often possible to see very beautiful sunsets across the low sky-line.



A DERBY DALE; WITH PEAK CASTLE IN THE BACKGROUND.

CHAPTER XI.—THE STONY HEART OF ENGLAND.

THIS is the name which has been given to the Peak District in the north of the county of Derby. Here the great Pennine Chain ends in a huge limestone mass called Kinder Scout.

The Peak District itself takes up about one-fourth of the county ; and it forms a wide, breezy moorland country, with limestone hills, rugged rocks, and many deep caves.

This part of England is another of those holiday districts which are visited in summer by large numbers of people. The chief centre for those who wish to take trips to the various parts of the district is Castleton, which lies about half-way between the great cities of Manchester and Sheffield.

Perhaps the most interesting things in the Peak District are the caves which have been hollowed out by underground streams in the limestone rocks. The largest is the Great Peak Cavern. It is about three-quarters of a mile long, and may be entered through an opening in the side of a hill.

The cave is divided into several rooms, joined together by rocky passages. One is called the Devil's Cellar. Here may always be heard a loud, rumbling noise. It is said to be caused by the falling of water somewhere in the heart of the hill.

Another large chamber is called the Grand Saloon. A third is known as the Blue-john Mine, from which are got large quantities of a deep-blue stone, used in making ornaments.

In the walls of this cavern many shells may be found, and from the roof hang a number of long, pointed pieces of limestone. When the cave is lighted with candles it is like a hall in a fairy palace.

Another famous cavern is the Speedwell Mine; through this runs a stream that finds its way into a great chasm known as the Bottomless Pit.

Kinder Scout has two peaks or summits. It lies to the north-west of Castleton. After rain or the melting of snow a stream rushes down its western slope to a lonely tarn, named the Mermaid's Pool. From the top of Kinder, which forms a wide table-land, many fine views may be had of the country round about.

Not only are most of the hills and rocks of this district made of limestone, but the water of the streams also contains a great deal of lime.

There is one well the water of which is so full of lime that it will soon give a hard coating to anything placed in it. It was at one time thought that the water of this well really turned things to stone.

Among the many wonders of the Peak District are the hot-springs of Buxton. They flow from the limestone rocks, and the water is bright, clear, and of a faint blue colour.

It has a sharp taste owing to the minerals in it,

and it is good for people who suffer from rheumatism and other diseases. Numbers of these people visit Buxton, and bathe in the water, which is run into large, covered baths.

CHAPTER XII.—THE QUEEN OF ENGLISH LAKES.

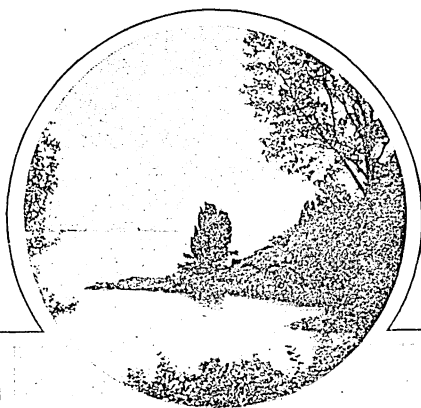
WE had already seen the beautiful lake of Windermere, and had thought that, surely, nowhere in England could such scenery be found. Then we heard that Derwentwater was still more beautiful, and was, in fact, the "Queen of English Lakes." So we made up our minds to go and settle the matter for ourselves.

We left the smoky London station in the early morning, and had a run of about six hours to Penrith. For the most part our journey lay through level land, but when we came to Westmorland the scene was changed.

Here we saw lofty, rugged mountain land; deep, rocky ravines; broad, smiling valleys; lovely dells; and open, breezy moorland.

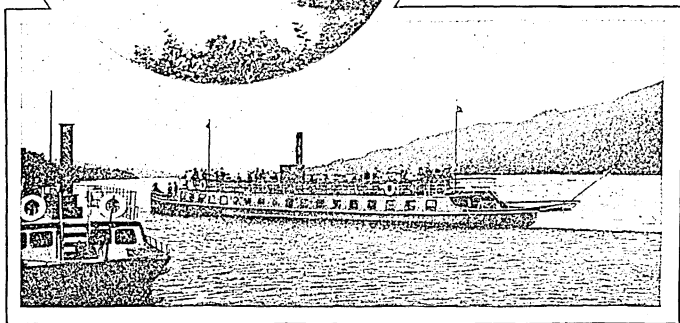
The engine puffed and snorted as the train slowly climbed to Shap Summit, and another train passed us going down the hill with steam shut off.

A short run brought us to Penrith, and as we stepped upon the platform we felt the cool breeze



from the hills—a welcome change after the stifling heat of London streets.

After a short journey almost due west we



Photos by

W. Jerome Harrison.

ON LAKE WINDERMERE.

reached Keswick—a clean station with buildings of the gray stone which we had seen in the hill-side quarries during the last part of our ride.

The place was full of people, for it was the month of August. And we did not find it easy to escape the busmen, cabmen, and hotel-keepers, who were all so eager to carry us off anywhere and provide us with anything.

After a while we set off for a walk round the

town. This did not take much time, for there was only one street, at the head of which we found a quaint old whitewashed building. Of this, the upper part served as the Town Hall and the lower as a fruit-market.

The building stood in an open space paved with cobble stones, and from here all roads seemed to lead to "*the lake*."

We took one which ran to the left; and on turning a corner we saw Derwentwater lying in a deep hollow and set round by steep crags and rugged hills.

A few minutes' walk brought us to the end of a path which ran by the side of the lake. It ended on a pine-topped rock known as Friar's Crag.

From this point we saw the sun go down behind the western hills. It cast a ruddy glow across the water and turned it for the moment into a lake of liquid gold.

Away to the right rose the great mass of Skiddaw, whose sides were just beginning to grow purple with the bloom of the heather. In the lake were several wooded islands, and on one of them we could just see a large house among the trees.

The sun dipped below the hills, crowning their tops with gold. The lake now lay half in shadow; and the islands stood out black against the clear

surface of the water, which had scarcely a ripple.

A few days later we saw Derwentwater when it was not so peaceful. A strong south-west wind sprang up and swept down into the hollow in which the lake lies as in a cradle.

The surface was tossed into waves, which broke into foam at the foot of Friar's Crag; and the water took the steel-gray colour of the clouds above.

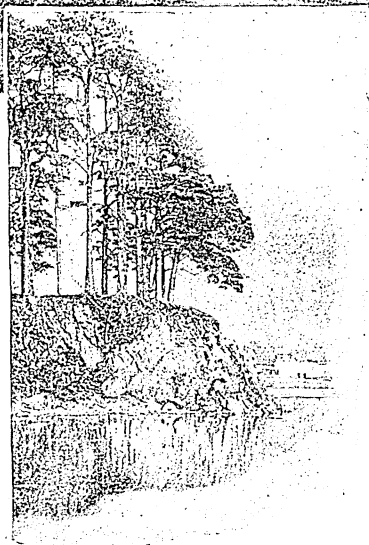
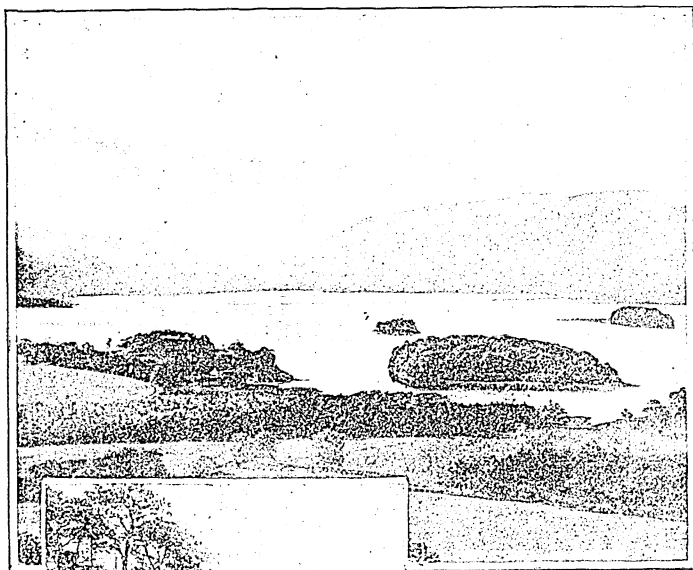
We went as soon as we could to visit the Falls of Lodore. We had heard of the "English Niagara," but we did not find it.

The weather had been dry for some weeks, and we had to picture to ourselves the tossing, foaming, boiling, leaping waters. But we could admire the rugged beauty of the great gray boulders, the high, rocky walls, and the overhanging trees.

One morning we had a fine view of the lake, the town, and the country round about, from the top of a hill, which rises near Skiddaw.

The lake lay in the shadow of a summer cloud to our left, and the little town nestled at our feet. Away to the right was the long, narrow lake of Bassenthwaite, which is joined to its sister lake by the River Derwent.

In a field to the left we could see a ring of upright stones, known as the Druids' Circle, which reminded us of the Stonehenge of Salisbury Plain.



Photos by Frith.

DERWENTWATER AND FRIAR'S CRAG.

We afterwards looked at these stones more closely. They told us nothing of those who had first placed them there; but we found that from the field in which they stood we had a splendid view of all the highest mountains in the district.

With our backs to Skiddaw, we had Saddleback on our left, Helvellyn and Scafell before us, Grisedale Pike to the right, and many other peaks between them.

The whole formed a great circle of blue-topped summits, which took strange shapes as the lightly-floating clouds moved in silence across them.

We had hopes of gaining a view, from the top of Skiddaw, of the Irish Sea, the mountains of south-western Scotland, and the peaks of the Pennines. So we climbed the steep path up the mountain with much toil and trouble, and with many a slip on the damp turf; but we reached the top only to be wrapped in a cloud, and drenched by a sudden fall of heavy rain.

We have not yet made up our minds whether Windermere or Derwentwater is "Queen of the English Lakes." Each has its queenly beauty and its charm; and every visitor to the English Lake District must settle the matter for himself.

CHAPTER XIII.—WEATHER AND CLIMATE.

HAVE you ever noticed that, when two friends meet, the second, if not the first, thing they speak of is the weather?

This is because the state of the weather has so much to do with our health and comfort. If it is

bright and fine, we feel cheerful and better able to work hard ; if it is wet or dull, our daily work seems harder than usual.

You do not need to be told that the weather in our country is constantly changing. If it were always the same, people would take very little notice of it.

But there is one good thing about our English weather : it is very seldom that it becomes too hot or too cold to work. We may put all this into four words by saying, " Our climate is temperate."

By " climate " we mean the general state of the weather. A " temperate " climate means one which is neither very hot nor very cold.

It is chiefly the position of England on the surface of the earth which causes it to have a temperate climate. Find out our islands on a globe or on a flat map of the world. You will notice that they lie between the cold regions of the North Pole and the hot regions of the equator, but nearer to the former than the latter.

We often grumble at our English climate ; and people who live in France or in Spain or Italy often speak of England as a land of mist and east winds.

But the following lines by an English poet

express the real feelings of most hardy Englishmen :

“ Welcome, black North-easter,
O'er the German foam ;
O'er the Danish moorlands,
From thy frozen home.

“ Come, and strong within us
Stir the Viking's blood ;
Bracing brain and sinew,
Blow, thou wind of God !”

In spite of our cold winds, our choking fogs, and our frequent rains, we are not so badly off as we might be. And this is partly because we have the sea all round us.

All over the world we find this to be the rule—that countries or districts next the sea have a more temperate climate than those which lie far away from it.

So the sea makes our climate milder in winter and cooler in summer than it would otherwise be. And as our island is only a small one, all parts feel the effect of the sea. If it were very large, only the coast districts would do so.

The winds which visit our country have a great deal to do with our climate. As we all know, they blow from nearly all points of the compass. But on the whole we get more winds from the south-west than we do from any other point.

Now, these winds blow from the broad ocean which lies to the west of our islands—the Atlantic Ocean. Over this great ocean the sun is always taking up moisture or water vapour, which passes into the air.

This air blows towards our islands, and brings the moisture with it. The south-westerly winds blow up the western part of England and Wales, and meet with the high mountains to be found there.

The mountains cause the air to move upward into parts which are colder. The cold melts the water-vapour, which falls as rain. So we find that the western parts of our country have more rain than the eastern.

The south-westerly wind is often very strong, and causes great storms. But it is not a cold wind; and as we get more of this wind than we do of the others, it helps to make our climate milder than it would be if most of our winds blew from the east or the north.

And as the western parts of England and Wales are the first to be visited by these mild, rainy winds, we find that these parts are warmer than the districts on the east coast.

Now, from what you have read, can you answer this question: "Why do most of our large rivers rise in the west?"

CHAPTER XIV.—RIVERS OF ENGLAND
AND WALES.

WE already know something about our rivers. We can trace the chief water-parting which runs down the middle part of the country, but nearer to the west than the east (see page 51). And we have seen also how the country is divided into a large number of river districts or basins.

Then, again, our lesson on the climate of the country showed us why the greater number of our rivers rise in the west. So that we have been learning something about the rivers while thinking of other things.

The rivers which flow to the east pass through lands which are, for the most part, low and level, and they have a long way to go before they get to the sea. Most of those which flow to the west pass from high ground to low ground, and have not far to go.

So we find that the easterly rivers are slower than those in the west, and therefore more useful for trade.

In fact, the chief trading rivers flow to the east, into the North Sea. The best way to study them is to mark first the three largest openings on the east coast—the Humber, Wash, and Mouth of the Thames.

Now note the streams which flow into these openings. To the Humber come two of our greatest rivers. From the north-west flows the Ouse. Mark how, with its feeders, it drains the whole of Western Yorkshire, and carries off to the sea much of the rain which falls on the eastern sides of the Pennine Chain.

Mark, too, the large number of towns in the district drained by these streams. Some of them may be already known to you.

Then, flowing from the south to the Humber, comes the Trent, which passes through three of our Midland counties, and then flows through a part of Lincolnshire.

We turn next to the Wash, and find that four rivers flow into it; the longest of which is the Great Ouse. These streams drain the Eastern Plain, and their lower courses flow through the Fen District.

You will not find many large towns in the basins of these rivers; but they pass through some of the finest farming lands in the country.

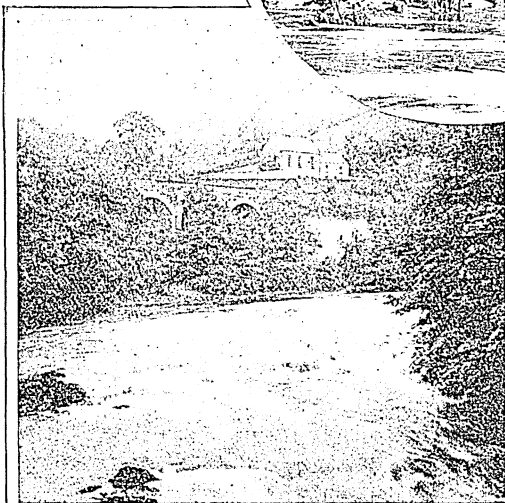
Into the next great opening flows the Thames, the chief trading river in the world, and in its upper part one of the most beautiful. Large ships can sail up this river as far as London Bridge, which is fifty miles from the Nore lightship at the mouth.

We turn next to the south coast, and find that the rivers here are short, for the watershed lies not far from the coast. Most of them are useful for trade to the people who live in the towns on or near them; but they are not so well known as the great easterly rivers.

Let us look now at the funnel-shaped opening known



ON
THE
AVON.



ON THE RIVER DEE.

as the Bristol Channel. It gets its name from the great port that stands not on its shores, but near the

mouth of the River Avon, which flows into it.

Into this opening flows the longest river in England and Wales, the Severn. You can scarcely call it a westerly river, except in the lowest part of its course.

The Severn is not so useful for trade as the Thames. There are many sandbanks at its mouth; and the very high tide, which we spoke of in Chapter IV., is dangerous for ships.

Gloucester, not far from the mouth, is a port; but, then, it is joined to the Lower Severn by a canal, by means of which ships can reach the city.

In its middle and upper courses the Severn passes through some of the most beautiful parts of our homeland.

The Wye, which flows through South Wales and Hereford, is also a very beautiful river. In its middle course it passes through the districts where there are many orchards and fruit-gardens, and in its lower course through a coal-field.

The Mersey is not one of the longest, but it is one of the busiest of trading rivers. Note the number of large towns and ports in its basin, and mark how wide it is for a long way above Liverpool. We shall learn more about it as a trading river in a chapter on our seaports.

Of the rivers in the North of England the most important are the Tyne, Wear, and Tees, which flow to the east. Each of these rivers is very busy in its lower course; and near their mouths you will find several large seaports and trading towns.

One of the best ways to study the rivers is to begin by learning all you can about the river near your own home. What is it called? Where does it come from? Where does it flow? Does it reach the sea itself, or does it join some other stream? Is it or is it not useful for trade?

CHAPTER XV.—FOREST LANDS.

"IN the dim dawn of history our island was a land of wood and marsh, broken here and there by patches of open ground, and pierced by trackways which ran through the forest and round the edges of the fen."

In the present day our island is a land of fertile plain and valley, dotted with towns and cities; a land of green pastures and yellow corn lands, with broad and well-kept roads, useful rivers and canals, and many railways.

What has become of the wide forest and the fen? Both have, for the most part, disappeared before the hand of man.

The forests have been cleared; only a very small part of the country is now forest land. The fens and marshes have been drained and the land used for farming, as we have already seen in the case of the Fen District near the Wash.

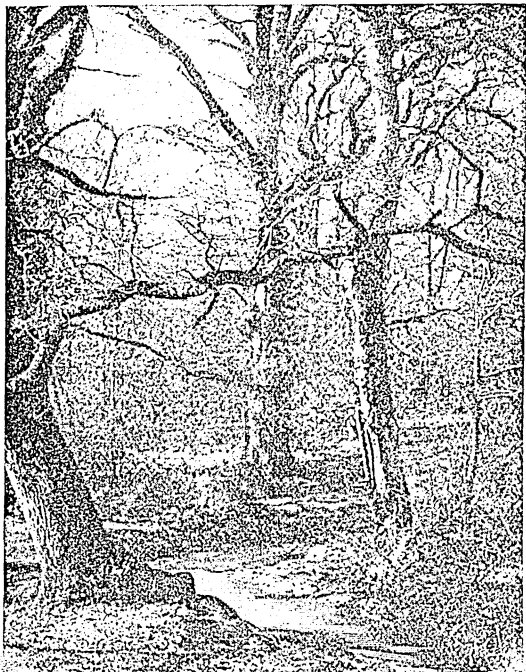
Here and there we still meet with patches of wooded land, and we are glad to see them, for we all know that "there is a pleasure in the pathless woods." We know, too, how the leafy trees add beauty to the English scenery. But there are only a few remains of the wide forests of ancient Britain.

The largest is the New Forest, in the southwest of Hampshire. It is part of the land once used as a hunting-ground by William the Conqueror.

It is now used partly as a pleasure-ground and partly as a cattle farm. It is noted for a breed of small ponies; and large herds of pigs feed on the beech mast, or nuts, which fall from the trees.

In the county of Nottingham are the remains of Sherwood Forest, which once also spread over parts of the counties of York and Derby. Portions of the old forest have been taken in to form the estates of several noblemen; and the district in which their mansions have been built is sometimes called "The Dukeries."

In the reigns of Richard of the Lion-Heart and



IN THE NEW FOREST.

(Photo by J. B. Dunning.)

King John there is said to have lived in Sherwood Forest a band of robber outlaws, under a leader named Robin Hood. Because he robbed only the rich and was good to the poor, Robin became a

kind of hero among the country people; and there were many tales told and songs sung about him and his men of the "merry greenwood."

There are many oaks some hundreds of years old in Sherwood Forest, and most of them are giants, both in height and girth. One has a hollow trunk which can easily hold sixteen men.

Epping Forest, in Essex, is kept as a playground for Londoners. Here the people of the great and crowded city may taste the delights of woodland scenery, and breathe such air as they cannot get in "London town."

Another forest not very far from London is that near the royal castle at Windsor. It contains chiefly oaks and beeches, and many beautiful deer play among the trees.

One of the best-wooded districts of England is the Weald of Sussex, Kent, and Surrey. The word "weald" means wood or forest. This wide stretch of land was once very thickly covered with trees; and the present woods are only the remains of a vast forest.

In the olden days there were many fierce wild beasts in the forests of Britain—bears, wolves, and wild boars. As the forests were cleared away these larger wild animals were killed off, though the wolf held his own for a long time. We read in our histories of English laws which offered

rewards to those who brought wolves' heads to the king's officers.

In the present day there is a herd of wild cattle kept in the grounds of a castle in Northumberland, and red deer run wild on Exmoor, in Devon. In many gentlemen's parks there are deer which are allowed to roam about as they please, but we can scarcely call these gentle creatures *wild* animals. And these are all that remain of the larger animals of ancient Britain.

CHAPTER XVI.—ROCKS AND CLAY.

IN an early chapter of this book we saw how the cliffs at different parts of our coasts are made of different kinds of rocks. Some consist of sandstone, some of limestone, some of chalk, and others of granite; while in some parts there are low cliffs of clay and gravel mixed together.

We can find rocks inland, too, though in many places we shall have to dig down through the soil to reach them. But we can see the edges of the rocks in mountain districts, in deep valleys, and in quarries, where the stone has been dug out for building. And if we look at the rocks in different parts of the country, we find that they are of many kinds.

Point out on the map the four pieces of land

which end in St. Bees Head, Braich-y-Pwll St. Davids Head, and Land's End. In each of these districts the hard rock which we call granite is found, most of it in Cornwall.

This stone is very useful for building houses and for making roads. In Cornwall much of it has been worn down by the rain and air to form a kind of white clay, which is used for making china.

Where granite is found we often meet with such things as copper and tin between the granite and the other rocks above and below it. There have been tin-mines in Cornwall for more than two thousand years; and until a few years ago a great deal of copper was got from this part of the country.

With the granite of Cornwall and Devon, sometimes above and sometimes below it, we find a red kind of sandstone. This is also found in South Wales and the West of England. It is useful for building purposes, but is, of course, not so hard as granite.

But the most valuable rocks are those among which the coal is found. They are found in various parts of England and Wales, but all to the west of a line drawn from Flamborough Head in Yorkshire to Portland Bill in the county of Dorset.

A district which has coal-bearing rocks is called

a coal-field. We shall have a whole chapter dealing with these important districts, for to her coal our country owes a great deal of her wealth.

Along with the coal iron is often found, and as the first is needed to smelt the second, this is a very good thing; for there is no need to bring the coal to the iron or the iron to the coal, and the work of smelting can thus be done much more cheaply. A little thought will show you why.

Another kind of rock found near those which bear the coal and iron is mountain limestone. The hills of the Peak District are made of it, as well as the high lands which form the northern part of the Pennine Chain.

Mountain limestone is used in the great furnaces in which iron is smelted, so that it is a good thing it is found near the iron-bearing rocks. It is also very useful for making roads.

Near the mountain limestone of the northern counties there is a kind of rock called millstone grit. It was so called because millstones were made of it, but its chief use is for building. It is not soon worn away by the weather, while at the same time the mason finds it easy to cut.

In the Midland counties, in Cheshire, and in the middle of Yorkshire most of the rocks are of sandstone. This is not so hard as the sandstone of

Devon. It is used for building, but is easily worn away by the weather.

In the sandstone rocks of Cheshire there is a great deal of salt. The rain-water which sinks down through the rock forms salt or brine springs. The water of these springs is pumped up in many places ; it is then boiled away, and the salt is left at the bottom of the boiling-pans.

So much brine has been taken out of some parts of Cheshire that in many places the ground has given way. In the town of Nantwich this has happened several times. Without any warning a house has sunk down and fallen into a hollow caused by taking out the brine.

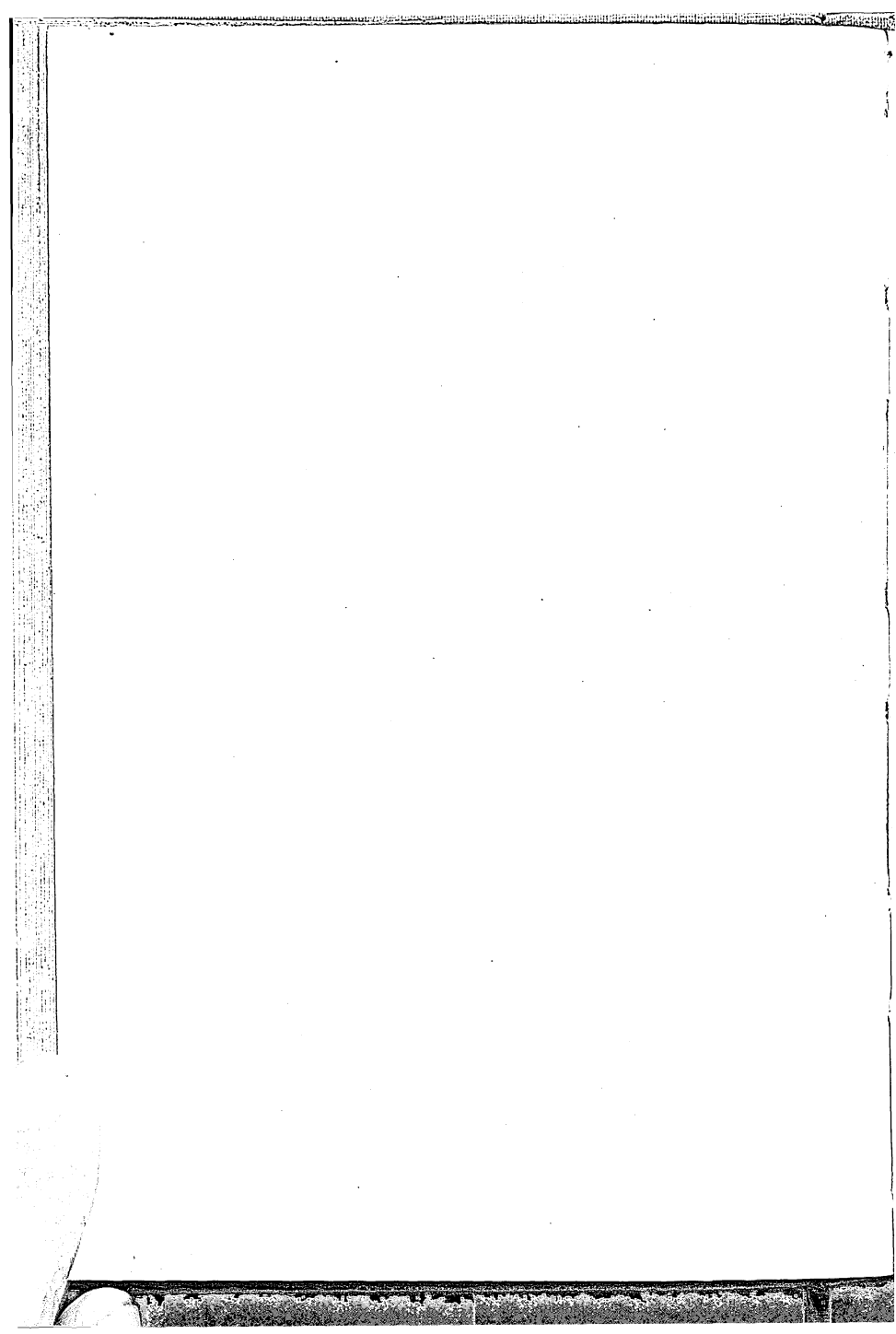
In the eastern and south-eastern parts of England many of the rocks are formed of chalk, which often contains hard, smooth stones called flints. You have already heard of the white cliffs of Dover and other parts of our coasts ; and inland you can often see the chalk when passing by train through a cutting.

The flints from the chalk are often used in making roads, as they are very hard ; they are also used for building in many places.

The North Downs and South Downs are made of chalk ; and it is one end of the ridge of chalk which forms the North Downs that comes out near Dover.



ON THE THAMES.



Draw a straight line from the east coast fishing-town called Yarmouth to Reading on the Thames in Berkshire ; then draw a second line from Reading through Canterbury in Kent to the coast.

Within these lines is a district in which deep beds of clay are found. It is called London clay, because, as you will see, London lies within the lines you have drawn.

You will find many brick-fields and houses built of brick in this part of the country. Of course, there are stone buildings, too, but the stone has to be brought from some of the other parts of England and Wales. This costs money, so we find that only the large buildings are built of stone.

Now you must set yourself to find out, if you can, what kind of rocks are to be found in your own part of the country. Are most of your houses built of bricks or stone? Have you a brick-field near to you, or a quarry? Have you ever seen a chalk cutting, or chalk cliffs, or a piece of flint, or a church built with flints?

CHAPTER XVII.—OUR COAL-FIELDS.

COAL, as you know, is got out of mines. It is found in great beds in certain parts of our island, and in many other lands as well. A district which has coal-bearing rocks is called a coal-field.

The places where the coal is found were once covered by marshy forests; this was ages ago, long before the earliest times of which you read in your history.

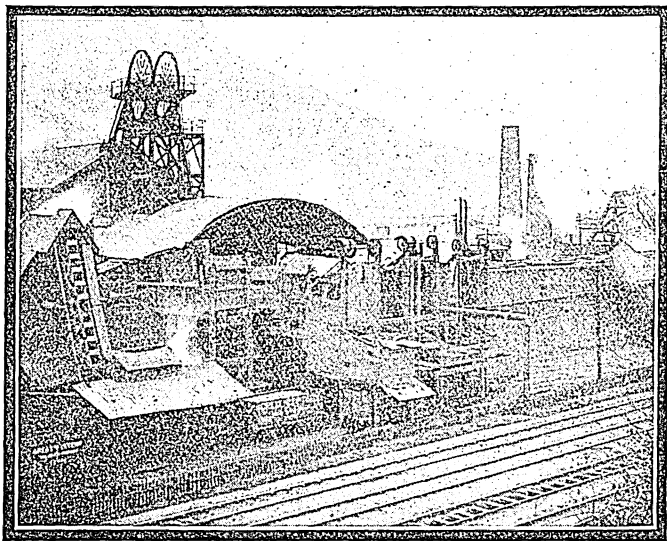
In time the trees and shrubs of these forests died, decayed, and settled down into the earth; then, as time went on they were covered over with sand brought down from the mountains by the rivers, or carried across the country by the wind.

Little by little this sand hardened into sandstone rock, pressing the trees and plants into a close, hard mass. As the years went on, this mass was changed into the hard, brittle, black, shining stone which we now call coal.

Look at the smooth top of a piece of good coal. Does it not seem to you to be marked with a grain such as you see in a piece of wood?

So we may say, if we will, "Part of this hard, black lump, which came out of a dark pit, may have been once a branch or trunk of a tree which lifted its head to the open sky, through whose leaves the fresh winds blew while strange birds played among them."

Pieces of coal have often been found marked with shapes of tree-leaves. Some show very clearly the form of tree-branches and even the markings of the outer bark of tree-trunks.



A WELSH COLLIERY.

We do not find these marks in every piece of coal. But now and again we find a piece which makes us wonder at the story it has to tell.

Coal is nearly always found in what is called a seam. This is a thick bed running along through the ground, and often at a great distance from the surface. Sometimes a seam of coal passes under the bed of a river, or even under the sea.

The coal-beds of England and Wales are mostly found to the west of a straight line drawn from Flamborough Head to Portland Bill.

There is one in the north-east corner, which we may call the Northern Coal-field. It lies partly in Northumberland, partly in Durham. Much of the coal found here is used in the factories in and near the great city of Newcastle, as well as in the iron works in the north of Yorkshire.

Some of it is sent by sea to London, and a great deal goes across the North Sea to foreign lands.

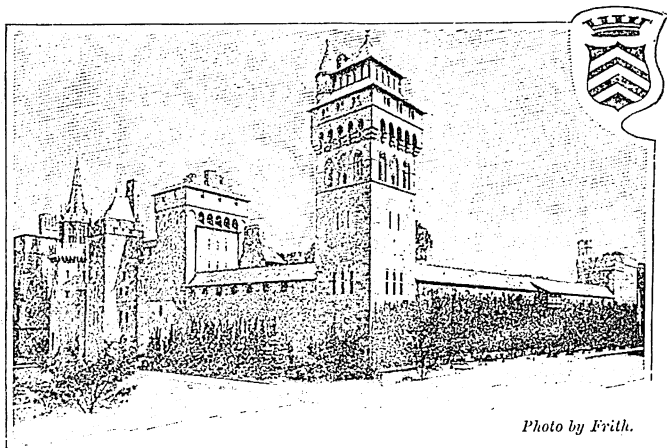
To the east of the Pennines there is a large coal-field, which lies between the rivers Aire and Trent. It is sometimes called the Yorkshire Coal-field, though it does not all belong to the county of York.

Most of the coal of this district is used in the woollen mills of West Yorkshire; in the iron works of Leeds and other large towns near it; and in the steel works of Sheffield, the town which makes so many knives and scissors.

On the other side of the Pennine Chain is the Lancashire Coal-field; it supplies the busy towns which lie round Manchester and have large cotton factories. These towns also use coal for making many other things besides cotton.

Farther south is the Midland Coal-field, which lies for the most part in the county of Stafford. It supplies two very busy districts.

One is the Black Country, which lies where the

*Photo by Frith.*

CARDIFF CASTLE.

counties of Stafford, Warwick, and Worcester meet. In and near this district there are many towns hard at work making metal goods of all kinds; the largest of all is Birmingham.

Then the Pottery District, in the north of Stafford, gets much of its coal from the same coal-field. It needs a great deal to feed the fires of the kilns in which the pottery is baked.

There is also a South Wales Coal-field, which lies partly in the English county of Monmouth. Much of the coal found in this wide district is of a special kind; it is very hard, and gives a great heat without smoke. It is used on large steamships and in our men-of-war.

A good deal of the Welsh coal is used in the

iron and copper works of the district. There are many large and busy towns on and near this great coal-field; but we shall here note only two—Cardiff and Swansea, both on the coast.

In dealing with the coal, we must not forget the iron. As we have already seen, it is often found along with the coal; but we must not expect to find iron in or near each of the coal-fields.

The chief iron-field in England lies to the south of the Northern Coal-field, just below the wide mouth of the River Tees. It is called the Cleveland District of Yorkshire, and much of the iron found here is made into steel at the great town of Middlesbrough.

Find out on the map a portion of Lancashire which is cut off from the rest of the county by Morecambe Bay. There is much iron ore in this district, in which the largest town is Barrow.

Iron is also got from other parts of the country, but we do not get enough from our mines to keep all our works and factories going. So we go to other lands beyond the sea, and buy iron from them. A great deal comes to us from Spain, which you can easily find on the map of Europe, down in the left-hand corner.

CHAPTER XVIII.—WELSH SLATE
QUARRIES.

MOST of us have used school-slates at one time or another ; and many of us may have watched a slater at work on the roof of a new house. Have we ever asked ourselves where the slates come from ?

Many of the common things of life come to us from far-off lands—our tea, coffee, cocoa, and most of our flour and meat. But we do not need to go beyond our own islands to find slates.

There are slate rocks in the counties of Lancashire and Cornwall ; but most of our slates come to us from the north-west corner of Wales.

There are two famous Welsh slate districts, one to the north and one to the south of the great mountain mass of Snowdon. In each of these places you will find the deep cuttings called quarries ; on page 95 you have a picture of one of them.

The slate is got out of the quarry in large blocks, which are made loose by the use of gunpowder. This is called “blasting,” and is done in the following way :

Workmen are let down the steep sides of the quarry with ropes, and held in certain places by men above while they drill small holes in the

slate wall; into these holes they put charges of powder. They are then drawn up to the edge of the quarry.

Then a horn is sounded. The busy workmen in the lower parts of the quarry at once hide in holes and recesses. After a short time the horn is again sounded; then there follows a large number of loud noises. Masses of slate are torn from the sides of the quarry, and fall to the lower parts.

The men come out from their hiding-places; and the blocks of slate are then placed on trucks which run on a narrow railway to the workshop. You can see the railway in the picture.

Here the blocks are split into thin sheets or layers by men who use a mallet and a chisel with a broad point. The slate splits readily, for these blocks are made up of layers which come apart when a few sharp blows are struck, in the right place, of course.

The "slates" are next cut into various sizes with a large knife; it is worked on a hinge, and has a very sharp and hard edge. Before they can be used for roofing or for school they must be smoothed and polished; but this is not done in the workshops at the quarry.

The quarries to the north of Snowdon are those of Penrhyn, and these are the largest in the world. The men who work in them live in a little town

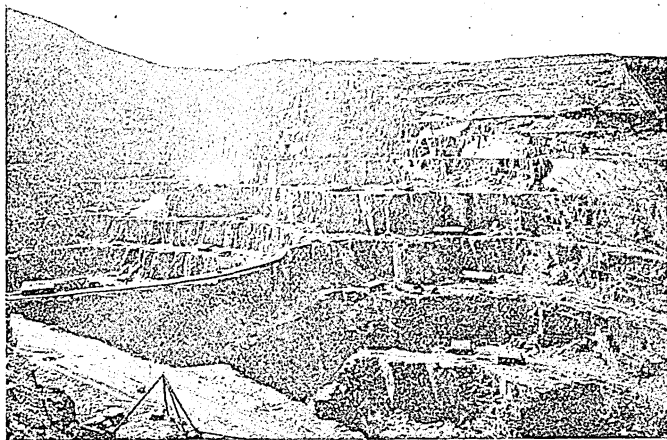


Photo by W. Jerome Harrison.

A WELSH SLATE QUARRY.

called Bethesda, which lies just below the great quarries and to the north-west.

To the south-east of Snowdon are the quarries of Festiniog. The slates from these quarries are brought down to Portmadoc on the coast by the Toy Railway.

This is a single pair of rails about thirteen miles in length; it gets its name from the fact that the distance between the two rails is only two feet.

The line winds up the mountain-side, and has so many curves that in places a train moving upon it takes the shape of the letter S.

CHAPTER XIX.—POPULATION—CROWDED
AND SCATTERED.

It is easy enough to say that the number of people in England and Wales is about thirty-three millions ; but this does not mean much to us.

Perhaps it will help you, however, if you are told that it would take more than a year to number them, counting one every second, and resting neither day nor night.

If the people were spread out evenly all over the land there would be about five hundred and sixty for every square mile, which would give plenty of room to everybody. But, as you know very well, people do not live in this way.

In some places, as in our large cities and towns, they are crowded together. In the country they live far apart, and there are some parts where there are hardly any people at all. Roughly speaking, two-thirds of our people live in the towns, large and small. The rest are scattered over the country districts.

When we come to study the towns of England and Wales, we find that many of them form close groups in different parts of the country. Let us take the map and try to find out why they are grouped in this way, and not placed at equal distances all over the land.

Beginning at the north-east corner, we find a group of large towns in and about the eastern part of Durham county. The largest is Newcastle-on-Tyne. Why should they be grouped together in this part?

Partly because in this part of England is found both coal and iron. The mining of these two minerals provides work for a large number of men; and they are also used in the factories, where all kinds of things are made.

Note, too, that these towns are on or near the coast, which makes it easy for them to send away the coal and the goods which it has helped to make.

Here is a wide and rich coal-field in South Lancashire; in the north of the same county are large iron beds. Again, no part of this county is very far removed from the sea, across which comes the raw cotton from America and other parts of the world.

We may look here for great towns and cities, and we shall find them grouped closely together, the largest being Liverpool and Manchester.

We turn next to the Yorkshire coal-field. It lies almost midway between sea and sea. But there are good waterways provided by the feeders of the Ouse and Trent, as well as a number of canals, all giving passage to the sea by way of the Humber.

Here again we find many large and closely-set towns ; among them are Leeds, Bradford, and Sheffield, with Hull as the chief seaport of the district.

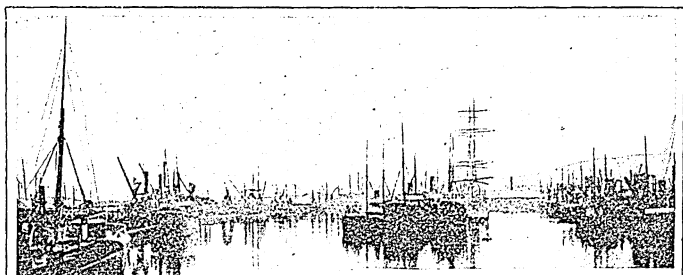
Farther south is the Staffordshire coal-field. This supplies the great and busy towns grouped round Birmingham, as well as the towns of the Potteries, the district about Hanley and Stoke.

From here it is not so easy to reach the sea, but the towns are well served by railways and canals.

South Wales, as we know, has also a great coal-field. Here, too, we find many great towns—such as Swansea and Cardiff—which would not have grown so large but for the presence of the coal.

London is really made up of a number of large towns rolled into one. It is not near any of the coal-fields, but it stands on a large and useful river ; and it can trade easily with the great foreign ports on the other side of the North Sea.

There are a large number of great and busy towns, not in groups, but placed at certain points on the coast. These are our seaports, and some of them we have noted in this chapter. They are of great importance to our trade, and shall have a chapter to themselves in a later part of this book.



SWANSEA DOCKS.

CHAPTER XX.

A GREAT CHANGE.

It is said that a certain French King, who wished to show how little he thought of our Edward III., called that King "the royal wool merchant."

The name was well chosen, though there was no disgrace in it; for in the time of this King, who won the great Battle of Crecy, the chief trade of England was in wool.

In all parts of the country there were large flocks of sheep, many of them kept by the monks. These were shorn every year; and the wool got from them was mostly sent across the North Sea to a country called Flanders.

In the towns and villages of that country there were many clever weavers and dyers. They took the English wool, spun it into yarn, and then wove

it into cloth ; then this cloth was sent to England to be sold at the fairs and markets all over the land.

In time, trouble fell upon the people of Flanders. The kings of Spain made war upon them, and they lost most of their trade. Some of this trade came to London, which grew to be a much greater and busier place than it had been before.

Many of the weavers and dyers of Flanders, too, came over to England ; they settled in English towns and villages, and taught many of the people to spend their spare time in weaving woollen cloth.

Before long England had not only ceased to send out wool, but had begun, instead, to send clothes and other goods made of wool to foreign lands.

These things were made in the cottages of the country people near the farms on which the sheep were fed ; and these farms were to be found all over the land, but most of them in the south.

We are told that "Manufacturers would ride a long way to buy wool from the farmers at the fairs. This wool was then brought home and sorted ; then sent out to the hand-combers ; and, on being combed, was again sent out, often for long distances, to be spun.

"The wool for spinning was given to some shopkeeper to 'put out' among his neighbours. Then the yarn was brought back and sorted into 'hanks.' The weavers would next come and take these away, and in due time bring back the cloth, which was often sent a long way to be dyed."

Each person who had a share in making the cloth did his work at home, and was paid according to the amount done; and the work of cloth-making was spread nearly all over the land.

But in time a great change took place. The cottage work gave place to factory work; and the making of woollen cloth and goods became the work of one or two districts. Let us see how this change came about.

The first English spinners used the spinning-wheel, and the work of making the wool into yarn was very slow. One thread was spun at a time, and the wheel was worked with the foot.

In 1770 a weaver of Lancashire named James Hargreaves made a frame on which many threads could be spun at the same time. It was called a spinning-jenny.

Then a barber named Richard Arkwright made a machine to be worked by water, and set up a mill on the banks of a river. Next came Samuel Crompton, who made a still better and quicker

machine called the "mule." This also was worked in a mill by the side of a stream.

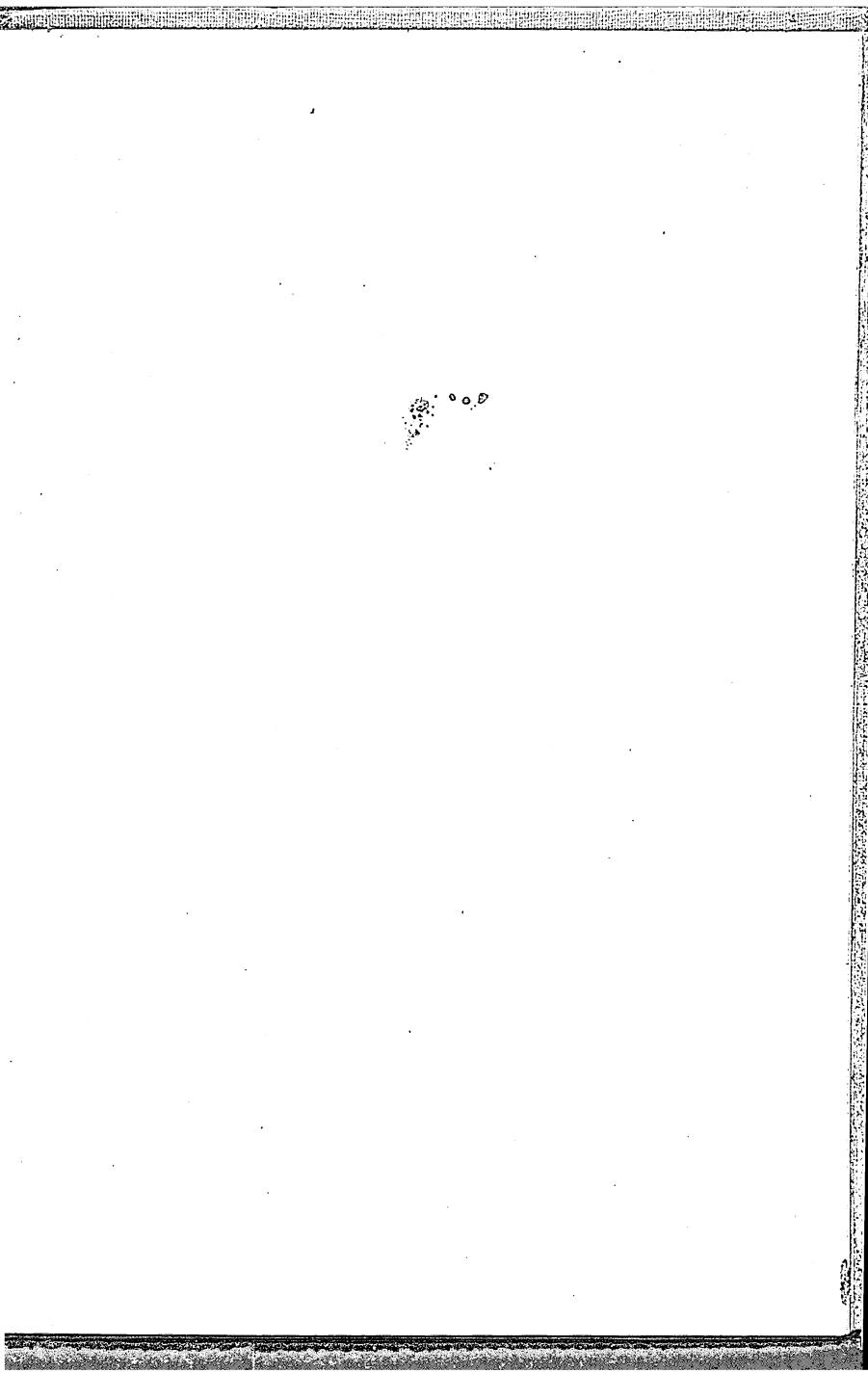
Thus the spinning was taken from the scattered cottages and done in mills, where a number of people worked together. The weaving was to follow, though not for some years.

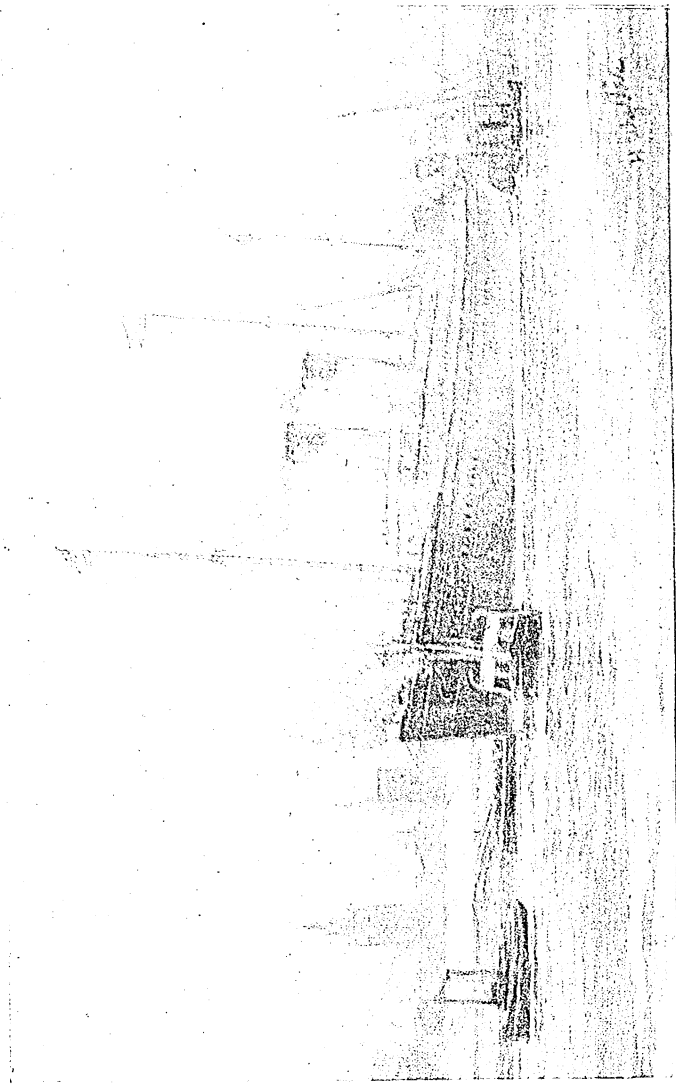
A Dr. Cartwright invented a weaving machine which was driven by water. Then came James Watt with his steam-engine for driving machines.

Fuel was wanted to work the steam-engines. Wood was used at first, but the supply soon failed, and coal took its place. So factories were built on or near the coal-fields.

Woollen goods had been largely made in the west of Yorkshire long before these machines were made. And in time the making of the wool became the chief work of this district.

It is still made in a few other places, but not to any great extent; and the industry has almost entirely left the south of the country.





LIVERPOOL LANDING STAGE.

P. 101.

II. & A.R. III.

CHAPTER XXI.—ENGLAND AS A GREAT WORKSHOP.

ABOUT a hundred years ago one of the chief occupations of the English people was farming; and the grain from which we made our flour came largely from our own soil.

In our time we could not feed ourselves for more than three months of each year with the corn grown in our own land.

There are, as we know, many fine farms in England and Wales; but it would not be right to say that ours is a farming country. It is chiefly a manufacturing country, a land of workshops and factories.

It has been called "the workshop of the world," but it would now be nearer the truth to call it "*one* of the greatest workshops of the world."

For there are other busy lands which make all kinds of things in factories just as we do; you will learn something about them after you have learnt about your own country.

Now let us ask ourselves this question: "What must a country have to become one of the world's great workshops?" We think of the things made in our own town or district, and this helps us in finding an answer.

A country must have these things:

1. Plenty of coal for the furnaces which drive the great machines in the factories.

2. A good supply of iron for making machines and tools.

3. Plenty of materials for making into goods of all kinds—such as wool, cotton, linen, silk, leather, wood, gold, silver, and many other things.

4. Cheap and ready ways of sending the goods to the people who wish to buy them. If it costs a lot of money to send them away they will have to be sold at a high price.

5. Hard-working, careful, well-educated workers who understand their work, and are always looking out for better ways of doing it.

Now let us think a little about each of these things in turn. We know very well that our land has plenty of coal; and we can show on the map where the great coal-fields lie. England and Wales takes more coal out of the ground each year than any other country in the world.

We know also that along with the coal we have a great deal of iron ore; not so much as we need, however, for we must send our ships across the ocean to bring some from foreign lands.

We must think next of the things needed to make up into goods in our factories. England cannot grow cotton because her climate is not

warm enough. From her sheep she does not get enough wool to make clothes for all her people.

She does not grow much flax to make linen, or hemp to make rope. Her climate is not well suited to the mulberry-tree, the leaves of which feed the little worm that spins the silk.

She has no gold, and scarcely any silver; no large forests to supply wood for building and for making the numberless wooden things which we use every day.

But England has a very large fleet of ships, both sailing vessels and steamships. And the things which are wanted for her factories can be brought in these ships from the lands in which they are to be found.

Across the seas they come, bringing cotton from America, India, and Egypt; wool from South Africa, Australia, and New Zealand; flax and hemp from the lands on the other side of the North Sea; and silk from the warmer lands in the South of Europe.

Now turn to the map to find out for yourselves how we can send away some of the goods we make. We send goods to all parts of the world, though, of course, we keep what we need for ourselves. If we gave up making things for the people of other lands many of our factories would have to be closed at once.

In the first place, there is the sea. Not only does it surround us, but on many parts of the coast it finds its way right into the land; note, as examples, the Humber, as well as the mouths of the Thames, Severn, and Mersey. Each of these openings brings the inland towns nearer to the sea.

And, as a rule, it is cheaper to travel or send goods by water than by land. Have you ever asked yourselves why this should be? Set your minds to work, and try to find out at least one of the reasons.

Then England has also a large number of rivers, as we have already seen. They are, it is true, not all useful for carrying goods; some are too shallow, and some have falls which make them useless for boats or barges.

But many of them have been made wider and deeper by dredging; and locks have been made where the water of the river falls from a higher to a lower level. Then there are the canals, which we might say are rivers made by man.

Last, but not least, England has very many miles of railways. The lines run into all parts of the country; and "goods trains" are always carrying heavy loads to and from the factories.

We must not forget what a great deal the workers have to do in making a great manu-



A FERRY ACROSS A RIVER.

facturing country. The high position which England has reached is due greatly to the hard work of her people.

But the people of other lands are working hard, too, and in many cases they are getting ahead of us. . We must see to this.

What can we do to keep our place? We must, first of all, make the best use of our time at school. Then, when we leave school to learn a

trade or to enter an office, we must try to find out the best way of doing our work.

And we must use some of our spare time to learn things which will help us to do our work better. So we shall help to keep our country abreast of the others which are taking their part in the world's work.

CHAPTER XXII.—THE POTTERY DISTRICTS.

THE name "pottery" includes earthenware, stoneware, and china. Earthenware is made of yellow clay, and is burnt in a kiln which is not very highly heated; it is soft and easily broken.

Stoneware is made of mixed clays, and burnt harder than earthenware; it is also given a very fine glaze. China is thin, brittle, and sometimes so fine that light shines through it. It is burnt in a kiln in which the heat is very fierce.

The district known as "the Potteries" lies in the north-west corner of the county of Stafford. The clay found in this part of the country is very useful for the potter's work. He uses it to make the "cases" in which the stoneware and fine china are placed in the kilns; he also uses it for making some of the pottery.

The coal for the kiln fires lies near at hand, as

we know, on the Yorkshire and the Midland coal-fields. But the rest of the things that the potter needs are brought from a long distance. The two chief things are china-clay and flints.

The china-clay comes partly from the southwest of England. This clay, as you may remember, is formed by the wearing down of the granite rocks of these counties. It is sent to "the Potteries" by sea from Poole, in Dorset, and St. Austell, in Cornwall.

Flint stones are crushed, and used in making china. They are found in the chalk rocks of the South of England, and many of them are also brought from France to the Pottery towns. The potter uses them to make the china white.

The Pottery District is not very large, but it is known all over the world for its fine china. There are several large towns and a number of villages engaged in the work. Among the towns are Stoke, Hanley, Burslem, and Longton.

The most interesting of the villages is Etruria, which was founded by Wedgwood, a famous potter who was born at Burslem. From his works in the village he turned out beautiful china, which was very hard and had a bright glaze. The way of making it was, of course, known only to himself.

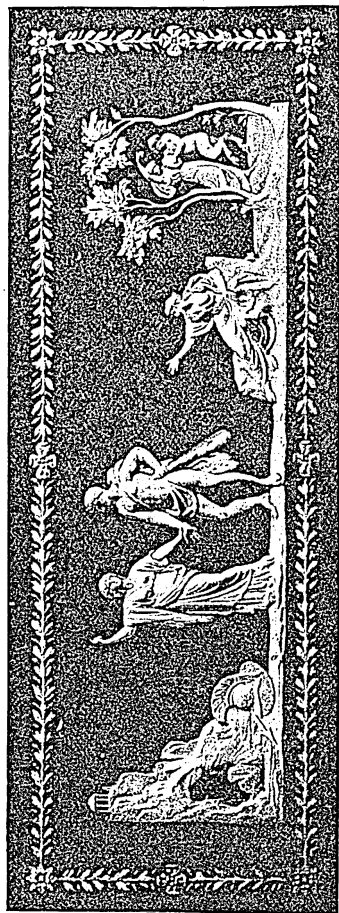
His china sold for large sums of money. It

was not only beautiful in colour and clearness ; but it was ornamented with raised figures made

from the drawings of a famous artist named Flaxman.

Wedgwood sent some of it to Queen Charlotte, who was so much pleased with it that she gave him the right to call it " Queen's Ware."

Other royal people have given names to china. At the city of Worcester very fine ware is made, which was called " Royal Worcester " by King George III. ; this china is famous for its beautiful colours. And " Crown Derby " china was so named by George II., who took a great deal of interest



SPECIMEN OF FLAXMAN'S DESIGNS FOR WEDGWOOD POTTERY.

in the beautiful china-ware of the busy Midland city of Derby.

It is interesting to watch a skilful potter at work. For round articles he uses the "potter's wheel," a kind of small table which can be made to spin round and round. Upon the "wheel" the soft, moist clay is placed; and while it is spinning round the potter uses his hands and a few simple tools to mould it into the shape he wants.

Many of the articles which come from the Potteries are now made in machines. At Stoke there are huge machines for making tiles, which are now so much used for hearths and garden pathways.

CHAPTER XXIII.—THE COTTON TOWNS.

WE make and use every year a very great amount of cotton cloth or calico. You will not find it very hard to name a number of useful things made from this cloth.

It is woven from cotton thread which was spun from the downy "cotton-wool." When you think of it, this double name is really a very strange one. For cotton is got from a plant, while wool is got from an animal.

The English people used wool for making clothes long before they began to use cotton. And when they first saw the soft white cotton

it looked so much like wool that they called it "cotton-wool." We often call it "raw" cotton; perhaps you can find out why it is given this name.

We cannot grow cotton in England because the climate is not suitable; so we have to send over the sea for all we need. There are many lands in which cotton can be grown. But we get most of ours from the United States, on the other side of the Atlantic. We also get a good deal from India, the great land in the south of Asia, which is part of our Empire; and from the land of Egypt, in the north-east of Africa.

A cotton field or garden is called a plantation. The plants vary in size and kind. Some are low shrubs four or five feet high, while others may reach a height of twenty feet.

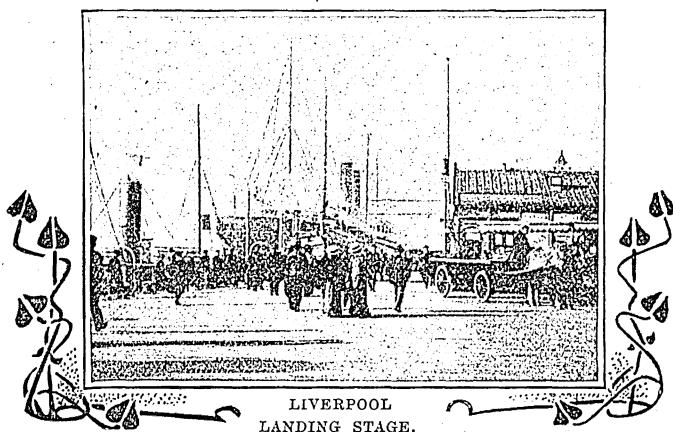
One of the best kinds grown in the United States is called "sea-island cotton," because it was first grown on some islands near the coast. It has a fine, soft, silky fibre.

The seed is sown in March or April, and the flowers appear in June. When their petals fall the pods containing the cotton may be seen. These swell little by little, and in about six weeks they burst, showing the white, downy cotton.

The cotton is gathered by negroes, and sent to

a machine called a gin. This tears the seed out of the down, which is then packed in bales and sent to all parts of the world.

Our cotton comes to Liverpool, and is then sent to a large number of towns on and near the Lancashire Coal-field. These are known as the



“cotton towns,” because their chief work is to make the raw cotton into cotton cloth or calico.

But we must not forget that many of the “cotton towns” are engaged in making other things besides cotton cloth. For they are near the rich mines of coal; and, as you know, a great many things can be made with the help of this useful article.

The towns on this coal-field lie close together;

and it seems a hopeless task to try to remember their names and where they lie with regard to each other. Let us try to make the task easier.

Make a triangle with its corners at Blackburn, St. Helens, and Stalybridge. Most of the great towns of the district will be found in and about this figure.

Manchester lies on its base. On or near its right side lie Rochdale and Oldham ; on its left side Wigan. A line joining Wigan and Rochdale passes through Bolton and Bury.

South of the base of our triangle lie Warrington and Stockport, the latter just in Cheshire. A line to the north-east, through Warrington and Bolton, runs through Burnley, not far from the eastern border of the county.

Another line, to the north-west, through Stockport and Bolton, passes through Preston. This town is about as far to the north-west of Blackburn as Burnley is to the north-east.

Most of the towns named above we might call "cotton towns." The largest is Manchester, which is joined to Liverpool by the Manchester Ship Canal.

Though it is the chief cotton town, Manchester has not many cotton-mills. It is full of large warehouses used for storing the cotton goods made in the towns round about.

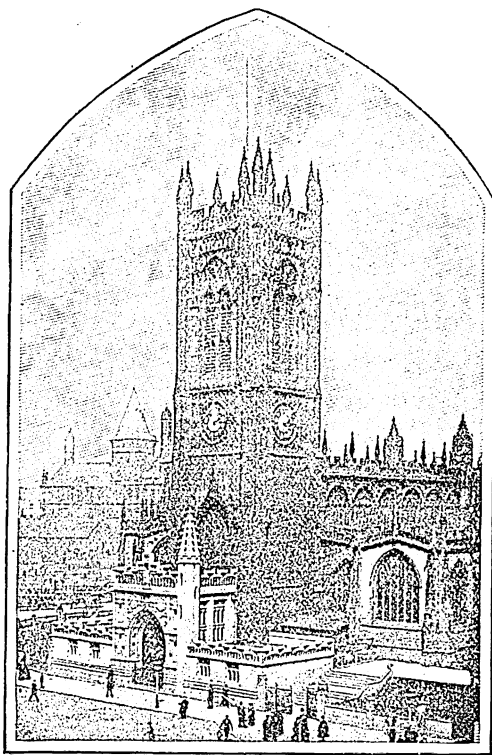


Photo by Frith.

MANCHESTER CATHEDRAL.

We can only name a few of the other things made in the busy towns on this coal-field.

Wigan makes brass and iron goods, and near the town are mines from which a very hard kind of coal is dug. It is called "cannel" coal, and is good for making gas.

Blackburn and Oldham make machines of

rugs, and table-cloths. And at Huddersfield a large number of fancy goods of many kinds are made.

Most of the wool comes to these towns from lands far over the sea. There is an Exchange in Leeds, where samples of the wool may be seen by the merchants. They come from the towns round about to see the wool, and buy what they want for their mills.

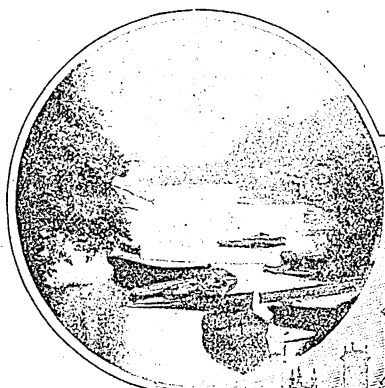
If the supply of wool were to fail even for a time, it would be a sad thing for many of these towns in West Yorkshire; but it would not stop all the work that goes on in them.

For, as we have said, they have other work to do. There are very large ironworks in Leeds, and factories or tanneries where leather is made. Bradford has dyeing-works, and makes silk.

Many of the Halifax people work in the large quarries near the town. Wakefield has a large trade in corn, and makes machines of many kinds. Dewsbury has flour-mills, and makes both iron and machines.

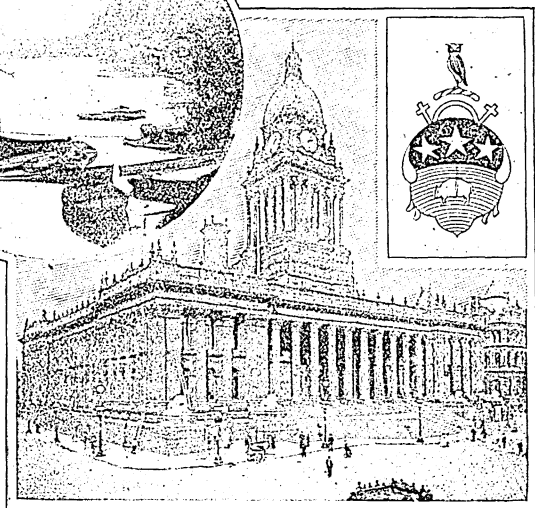
So we see that the workers of West Yorkshire do not all depend upon the ships which come from Australia, New Zealand, and South Africa with the wool.

How do the goods made in our woollen towns



A PEEP AT ROUNDHAY PARK,
LEEDS.

TOWN
HALL,
LEEDS



reach other parts of the country? Let us think this out with the map before us.

These towns lie in the middle of the country, about as far from the sea on one side as on the other. They have goods to send to every part of our island for home use, and to the sea-coast for export to foreign lands.

We think first of the railway, which is quick and handy; and the map shows us that Leeds and the other woollen towns are well served by

lines, which run to all parts. If the goods must be brought quickly to the buyers, they must be sent by rail.

But some of these goods are very heavy, and it costs a great deal of money to send them by rail. Therefore, when time will allow, they are sometimes sent by water.

The map shows us that those for foreign lands must go to the eastward. The Aire, which flows through Leeds, joins the Ouse, which flows into the Humber; and on the Humber stands Hull, the great port of the district.

Now, at one time the Aire was not of much use for sending heavy goods away from the woollen district. But it has been made deeper and wider, and is now very useful for this purpose.

We do not expect to find our way to the west coast by water, for the Pennine Chain lies between the woollen towns and the cotton towns. But there is a canal from Leeds and one from Huddersfield running westward into Lancashire. The latter goes through the mountain chain by a tunnel three miles long.

To speak of wool makes us think at once of West Yorkshire. But there are a few other towns not in this district which have mills where woollen goods are made.

We have already spoken of the carpets of

Halifax, which are made from woollen yarn. A great deal of this yarn, made at Bradford, is sent to Kidderminster, in the county of Worcester; here it is made up into carpets of many kinds.

The first place in England to make carpets is said to have been Wilton, in the county of Wilts; and the making of these useful things still provides work for a number of people in that town.

Before machines worked by steam were used, the West of England was known far and wide for its good, strong cloth called "broad-cloth." But now the raw wool is made up into cloth in only a few towns in the West, such as Trowbridge and Bradford in Wiltshire, and Stroud in Gloucestershire.

There are also woollen-mills at a few towns in the Welsh county of Montgomery; and here a good deal of the wool is made into flannel.



A WELSH GIRL.

CHAPTER XXV.—THE BLACK COUNTRY.

PLACE your finger on that part of the map where the four counties of Shropshire, Stafford, Warwick, and Worcester meet. This is the centre of the busy district often spoken of as the Black Country.

The name is a good one. There is blackness on the surface of the land and in the air. It is all, of course, due to the coal which is used in the works and factories of the district.

This blackness would be one of the things which a visitor to this part of the country could not help noticing. Another would be the noise — the clashing and grinding of the machines; the clang of the hammers; the rumbling of the carts and trucks; the puffing and screaming of the locomotives; the roar of the furnaces.

And what is the result? From this part of England are sent out huge supplies of iron and metal goods of every kind.

Look about you, and name the things in the schoolroom which are made of metal. Many of them have most likely come from the Black Country—the stoves, the hot-water pipes, the window-catches, the hat-pegs, the metal legs of the desks, the pens with which you write, the locks on doors and desks.

These are only a few of the smaller useful articles which are made in the busy works and factories of this district. If we were to name all the metal goods made there, it would take us a very long time, and our list would fill many pages of this book. And it would contain the names of things which range in size from an iron bridge long enough to cross a broad river to a simple pin.

The district in which the Black Country lies was once covered by the great Forest of Arden, and the timber was used for smelting the iron found in these parts.

The trees were felled, and the wood was burnt and made into charcoal ; and this was used in the furnaces. Beside the iron lay the rich beds of coal, but it was not used at that time for smelting. Indeed, many people thought for a long time that the fumes from burning coal were poisonous.

In the time of James I. a man named Dudley began to try coal for smelting iron. He found that it was the right thing for the purpose, and his plan was before long followed by many others.

Soon the Black Country began to earn its name. People had wondered what they should do when the trees of the forest were all felled ; but now there was no need to fear for supplies of fuel.

The two largest towns of this busy district are Birmingham and Wolverhampton. A straight line joining these two towns covers a distance of about thirteen miles, and on or near this line lie Bilston, Wednesbury, and West Bromwich.

All these towns engage in mining coal and making metal goods. They lie close together; in fact, the space between Birmingham and Wolverhampton is filled with an unbroken line of mines and blast-furnaces, lime-kilns and quarries, factories and forges.

Through Wednesbury draw a short line at right angles to our first line. This passes through Walsall on one side, and Dudley on the other, these towns lying at about equal distances from Wednesbury.

Thus we have the chief towns lying on a cross which points to the north-west. We might add to them three other busy towns—Darlaston, Brierley Hill and Rowley Regis.

Birmingham is by far the largest, and is sometimes called the "Queen of the Midlands." It is a fine city, with many parks and open spaces; and, though it lies in the smoky Black Country, it is a healthy city, for it stands at a good height above the sea.

In nearly every street there is a factory, and the trades carried on in the city are many and

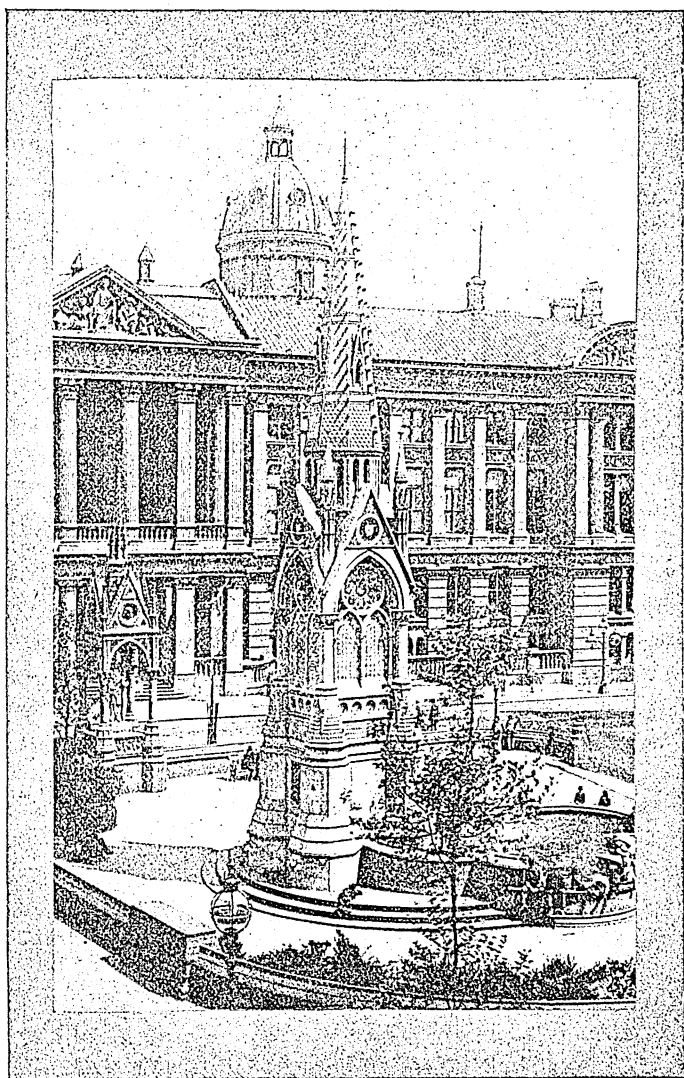


Photo by

W. Jerome Harrison.

CHAMBERLAIN SQUARE, BIRMINGHAM.

various. "The men of Birmingham," said a citizen a long time ago, "will do whatever skill and metal can."

They make, among other things, guns for the army and for sportsmen; money for people in foreign lands; nails and screws, nuts and bolts in millions; watches, clocks, and silver-plated goods, such as we see in the windows of the jeweller; toys and fancy metal goods of all kinds. And in the work they use not only the iron found not far from the city, but all the other metals drawn from every part of the world.

Each of the other towns is known for some special thing. Wolverhampton makes locks and a great deal of enamelled ware. Wednesbury makes great bridges, which are sent away in many pieces to the places for which they are needed.

Walsall sends out a great number of leather goods, mostly harness for horses. Dudley makes nails, screws, and anchors.

Round about Stourbridge there is a great deal of clay, which is of a special kind; it is used to make things that have to stand a great heat, such as fire-bricks, ovens, and pipes for flues.

CHAPTER XXVI.—TYNE, WEAR, AND TEES.

DRAW a straight line across the map of Durham county from Newcastle to Darlington. This cuts off to the eastward one of the busiest parts of the country.

It is bounded on the east by the sea ; on the north by the lower course of the Tyne ; on the south by the winding Tees ; and it is crossed by the lower part of another useful river, the Wear.

Here there is plenty of coal and iron of the best kind. Just across the Tees lies the rich iron bed of the Cleveland District of North Yorkshire. When we remember these two facts, we are not surprised to find that East Durham is a very busy district.

For a very long time the river Tyne has been the chief outlet for the riches of the Northern Coal-field ; and the "coaly Tyne" is a name as well known as the "silvery Thames."

The name Tyneside is given to the district round about the lower course of this river. Here there are great ship-yards, forges, works, and factories, which run in an unbroken line on each side of the river from Newcastle to the sea.

One of the suburbs of Newcastle, named Elswick, is known all over the world for its great works, where warships and "Armstrong" guns

are made. War-vessels are also built at Jarrow, on the south side of the Tyne, below Newcastle.

We are not going to give a list of the articles, large and small, made in the works and factories of Tyneside. But three special things might be noted ; these are, glass, paper, and chemicals. Newcastle is joined by several bridges to the busy town of Gateshead, which does much the same kind of work, and has also large shops for making railway-engines.

Two of the bridges between these two towns are worth noting. One is the Swing Bridge, which is built of iron, and lies so near the water that big ships cannot pass under it. When they wish to pass up the river the bridge is swung round by machines beneath it over the wooden pier shown on page 131.

The other bridge is the High Level Bridge, which was built by Robert Stephenson, the son of George Stephenson, who is known as the "father of railways." It may also be seen in the picture on page 131. It has six spans, is made of cast-iron, and is high enough to allow the tallest vessels to pass under it. Trains run across the top, and underneath there is a carriage-way, with a footpath on either side.

On the Wear there are two places, both well known, but quite different in character. At the

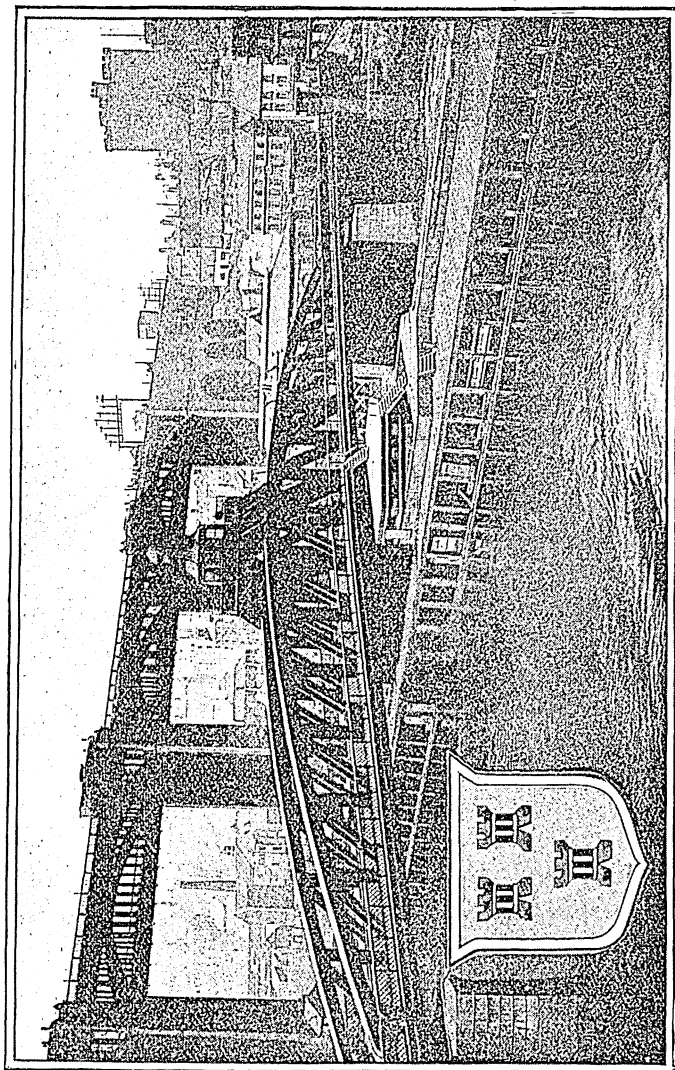


Photo by

Mason, Swan, and Morgan.

THE HIGH LEVEL AND SWING BRIDGES FROM THE GATESHEAD SIDE OF THE RIVER TYNE.

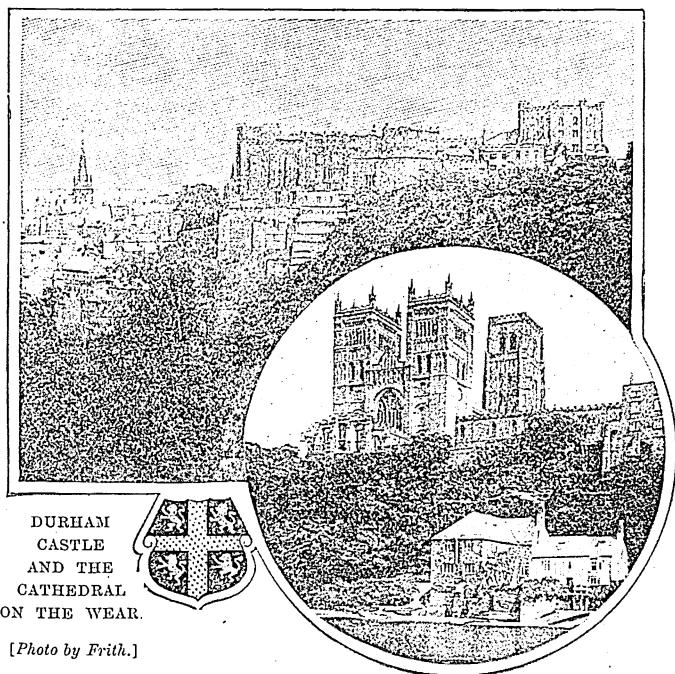
mouth is Sunderland, the largest town in the county of Durham. Its chief work consists in building ships and sending out coal. Only one town in Great Britain has larger ship-building yards, and that is Glasgow in Scotland.

About fourteen miles up the Wear stands the old city of Durham, which is as quiet and restful as Sunderland is noisy and busy. It has a fine cathedral church and an old castle, which was once a stronghold for the men of the North against the Scots.

We pass next to the Tees. On and near this river are three large and busy towns—Darlington and Stockton in Durham, and Middlesbrough in Yorkshire.

Stockton, another busy town with large ship-building yards, was the terminus of the first steam railway in the world. This was the Darlington and Stockton Railway, opened in 1825. Here is an account of the first run on the line with a train of thirty-eight waggons and carriages :

“The signal being given, the engine started off with this great train of carriages at such a rate that in some parts the speed was twelve miles an hour! The engine, with its load, reached Darlington, eight and three-quarter miles away, in sixty-five minutes.



“The six waggons loaded with coal were now left behind. The engine then set off again, and reached Stockton in three hours and seven minutes, allowing for several stoppages. By the time the train reached Stockton there were about 600 persons in the carriages or hanging on to the waggons. These must have gone at a safe and steady pace of from four to six miles an hour.”

When this railway was laid Middlesbrough

contained one or two houses. The laying of railways and the working of the Cleveland iron mines have made the town one of the largest and busiest in the North. It sends out a very great quantity of coal.

CHAPTER XXVII.—OUR FISHERIES.

THERE is no daily work more full of peril than that of the fisherman. He often has to face in his little boat the storms which toss about even the big ships like playthings.

In the winter of 1883 there was a great storm on our east coast; and a writer thus describes what happened to a small steamboat which was carrying a cargo of fish into Grimsby :

“She was struck by a heavy sea, which not only burst her, but shivered her into tiny scraps. Strong wire ropes were snapped like worsted; wire stays which held well tore up great lumps of the bulwarks; and the great force of the sea was shown by the wood of the torn bulwarks being cut as clean as if a huge knife had shorn through.”

This vessel was coming from the Dogger Bank, a part of the North Sea which teems with fish of many kinds. To this fishing-ground boats go out from Grimsby, Lowestoft, Yarmouth, and other places on the east coast.

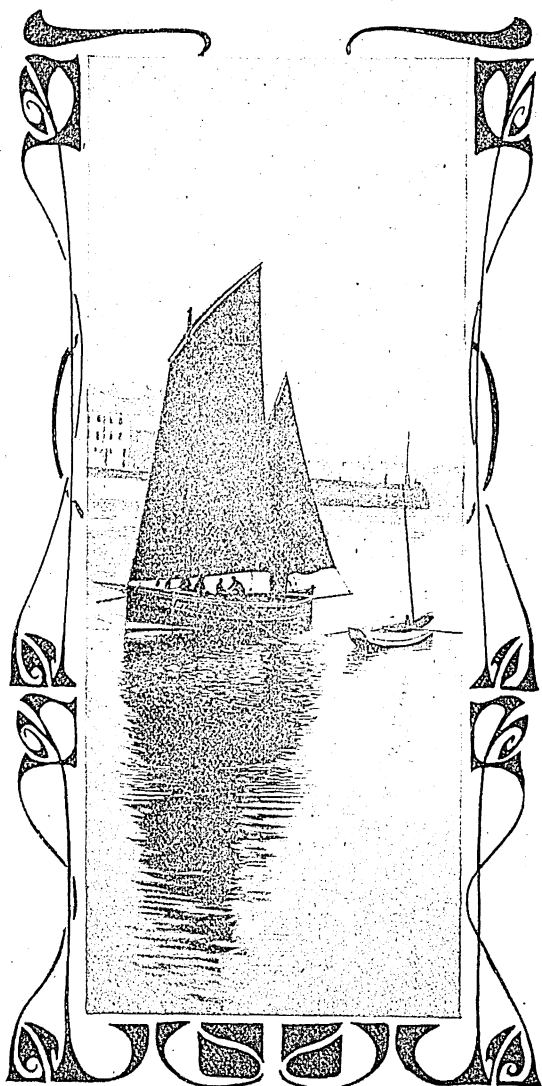


Photo by W. Jerome Harrison.

They are, as a rule, strongly-built sailing-boats, and they are called "trawlers" from the trawl or net which is let down over the edge of the boat and dragged through the water to catch the fish.

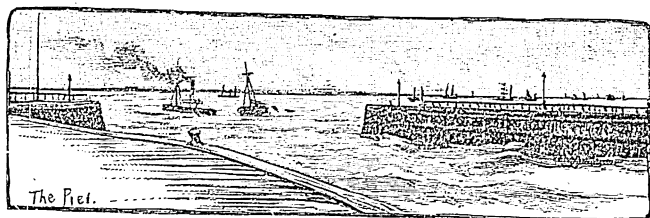
Each trawler stays about eight weeks on the Dogger Bank; and all the time the men are reaping the harvest of the sea. Of course, they do not wait until the end of the eighth week to bring their fish to shore.

At certain times the steam "carriers" put out to bring in the catch. When one of these boats reaches the Dogger Bank, it collects the fish, often with much labour, owing to rough weather; then it steams back to one of the east coast fishing-ports.

Grimsby is one of the greatest fishing-ports of the world. Here there are large docks with railway-lines along the quays; and no time is wasted in lifting the fish from the steam carriers to the trucks in which it is to travel to the inland towns; for it must be brought quite fresh to the fishmonger, or he could not sell it.

About half the people of Grimsby are engaged in the fish trade in one way or another. On one single day more than six hundred tons of fish have been sent inland from the docks of this town.

A great deal of ice is also brought to Grimsby



ENTERING GRIMSBY HARBOUR.

across the North Sea from Norway. It is very useful for keeping the fish fresh in warm weather.

Yarmouth and Lowestoft are well known for their herrings. The boats go out in the evening with their great nets coiled up, ready to be flung out when a good place has been reached. The nets are kept in the water during the night, and the men wait quietly for the "shoal" of herrings; they can tell where it is by the green, oily patch on the water.

Soon the net fills, and is dragged over the side of the boat. The fish are thrown down into the hold, and from the slippery, gleaming mass comes a "squeesh, squeesh!" the noise made by the bursting air-bladders of the herring.

The boat settles down into the water under its heavy load, but the men know when to stop; for they have yet to get their catch to shore, and must not overload their boat.

Off the coasts of Cornwall and Devon a fish is taken in the autumn of the year which we do not

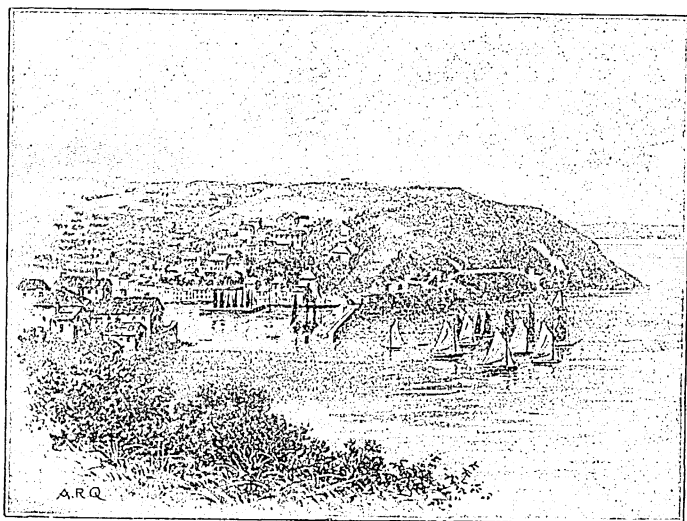
see in our fish-shops. This is the pilchard; it is salted, and sent mostly to Spain and Italy.

Pilchards visit our south-western shores in "schools," and the watchers on the cliffs can tell when a school is near the coast by the dark, shady patch on the surface of the blue sea.

When this is seen, the fishermen put off in the seine-boat; this gets its name from the "seine," or net, used in the work of catching the pilchard. It is let down into the water, and after a time closed and brought up again with its load of fish.

Many other kinds of fish are taken off these south-western shores; and there are a large number of fishing villages on the Cornwall and Devon coasts. One of the best known is Brixham, near Torquay. A visitor to this place writes:

"Pretty it is to watch the fishing fleet outward bound, and just as pretty to see it come home. The flying black boats come in their long procession; they lean over and glide swiftly through the water, each with a wealth of hissing foam about her bows. Of course, you think that she must come crashing into something if that swift speed is kept up; but no: at the right instant the mainsail drops, and the boat glides with sleepy smoothness into the basin at home. Then is your time to buy bargains."



BRIXHAM.

There are numerous other fishing towns and villages besides those of our east and south west coasts. Some of them which lie near your own home you will be able to name. And it will be an interesting task for you to set to work to find out :

1. What kind of fish is caught near these villages or towns.
2. How the fish is taken, and what the boats are like.
3. Where the fish is landed.
4. Where your own town or village gets its fish, and how far it has to come.

We might give you here a list of the chief kinds of fish found near our shores, but it would simply be a string of names. Your best plan is to keep your eyes open when you visit the fish-shop, note the different kinds of fish, and then get to know their names for yourselves.

CHAPTER XXVIII—OUR FARM LANDS.

LET us suppose that we are given a map of England and Wales, and asked to point out the chief places where most of our grain, fruit, and vegetables are grown.

At first sight the map seems to tell us nothing about this; but, as we have seen before, there is more in the map than appears at first sight.

What the map really does is to tell us where we should not expect to find many farms and large gardens.

For example, we must leave out the very high rugged districts; for we cannot grow corn or fruit on the bare sides of steep mountains; though it is true we sometimes find that their lower slopes yield food for man and beast. So we must leave out the mountain-lands of north and west.

We must also pass over the districts where the large and busy towns are grouped together—that is, generally speaking, we must leave out the

coal-fields and the London district. What parts of the land are left ?

The far north-east corner ; the eastern part of Yorkshire ; the eastern counties ; the Cheshire Plain ; the Midland Plain south of the Black Country ; the valley of the Thames ; the western English counties ; the central part of Wales ; and the whole of southern England from Devonshire to Kent.

Now, if we recall what we learnt in the chapter on climate, we can broadly divide the farming counties into those which grow grain and those which breed cattle and horses.

As we know, the eastern counties get less rain than those in the west. Now a lot of rain is not good for grain, but it is good for the pastures in which the cattle are fed.

So we find a large number of dairy farms in the western English counties from Devonshire to Cheshire. From these shires come our chief home supplies of butter and cheese. We have all heard of Devonshire cream, of Gloucester and Cheshire cheese, and of Cheddar cheese, which gets its name from a village in Somerset.

The drier climate and the clay soil of the eastern counties are both suited to the growth of grain. The shires of York, Lincoln, Norfolk, Suffolk, Essex, and Cambridge are the chief

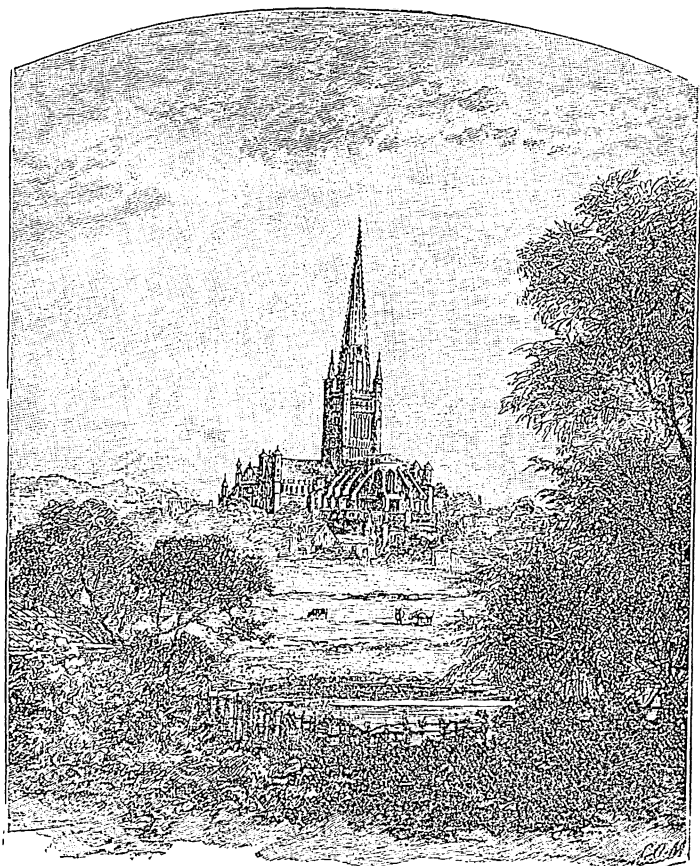
districts for oats, barley, wheat, rye, and vegetables. These things are also largely grown in some of the Midland counties.

In the southern counties, as far west as Somerset, and on the fertile plains of the Lower Severn, most of our fruit is grown—apples, pears, cherries, and plums. The three chief fruit counties are Kent, Hereford, and Worcester. The former is also well known for its hops, which are used in making beer.

The hop harvest is one of the great events of the year in this part of the country. Many people leave other work to take part in it; and to some places come crowds of poor people from London, which is not far by rail from the hop-gardens.

Cattle and horses are fed mostly on the plains, but sheep may be fed in the higher lands. They can climb the hills and mountains, and often feed at a great height above the river valleys; and they can live on the coarser grass on which the larger animals would not thrive. They are to be found in most of the counties of England and Wales. Some of the best known are the small Welsh sheep, the Leicesters, and those which feed on the South Downs.

England is noted for its fine breeds of horses and cattle. Horses are bred specially for racing,



NORWICH CATHEDRAL.

hunting, or riding, for drawing carriages or carts, and for work on the farm. Each of these is quite distinct in kind from the others.

Among the finest breeds of cattle are the

Herefords, mostly red with white faces; the Devons, also red, with beautiful curved horns; and the Jerseys and Alderneys from the Channel Islands.

But the kind of cattle most often seen are the shorthorns, for the bullocks yield good beef and the cows good milk, and plenty of it.

Now, draw on your slate or on a piece of paper an oblong 3 inches across and 1 inch deep. Measure 2 inches along the top and bottom towards the right, and join the points by an upright line. This line divides the oblong into two parts, one of which is twice as large as the other.

Along the top of the oblong print the words "Farms in Great Britain." Within the oblong print "Grass Land" in the larger part, and "Grain, Vegetables, and Fruits" in the smaller part.

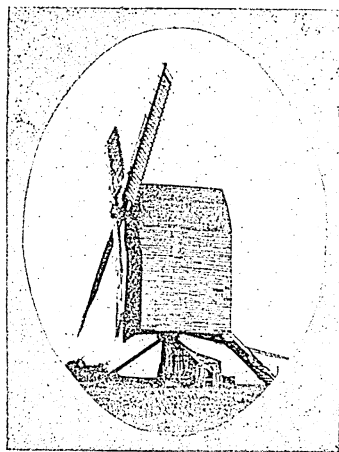
This drawing will perhaps help you to remember that, at present, twice as much ground is taken up in rearing cattle, sheep, and horses as in raising corn and food-stuffs.

At one time most of the work on our farms was done by hand; but in our day there are many machines used which do the work much more quickly and cheaply.

One very useful machine is called a "reaper

and binder." It is drawn by horses through the standing corn. As it moves it cuts down the corn, binds it in bundles, and then throws these bundles to the ground. And this is only one of the many machines now used in farm work.

There are several places in the east of England where there are works for making machines and tools for the farmer. Among the best known are Lincoln, Grantham, Norwich, and Ipswich, all in our chief farming counties.



CHAPTER XXIX.—THE BRITISH ARMY.

GREAT BRITAIN is one of the leading countries of the world ; and her Empire includes between one-fourth and one-fifth of all the land of the globe.

But the British army is by no means the largest in the world ; in fact, it is really one of the smallest. The largest armies are those of Russia, France, and Germany.

This seems strange on first thoughts. But when we look into it, we see the reason more clearly. Britain is an island, and has no frontiers, except those washed by the sea.

The other countries named above have land frontiers to guard, as may be seen on a map of Europe ; and the longer their land frontiers the larger must be their armies.

Our chief help in case of need would be our navy, which is the largest in the world.

Our regular army is made up of men who spend their whole time in learning the soldier's work. Besides this we have a volunteer army ; this consists of men who give their spare time to the work of drilling and making themselves fit to defend the country if they were ever called upon to do so.

The army is made up of cavalry, infantry, artillery, and engineers. The cavalry are horse

soldiers; the infantry are foot soldiers; the artillery have charge of the guns; the engineers build forts and bridges, make railways, and lay telegraph-wires.

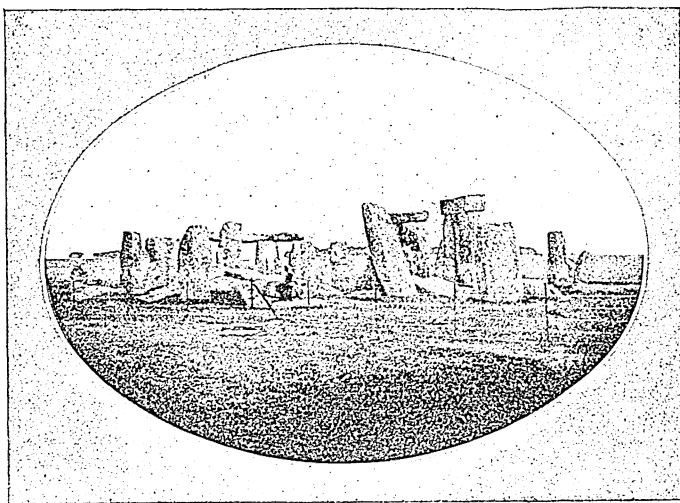
There are doctors and nurses to take care of the wounded; and there are also men whose work is to look after the food and clothing of the soldiers, and to provide them with all that they need for their terrible trade.

In a large number of our towns there are barracks for our soldiers. These are called "garrison" towns, and they are to be found both on the coast and inland.

Aldershot, in Hampshire, has a large soldiers' camp; it may be called a soldier's town, for wherever we turn soldiers may be seen. As a rule, there are about ten thousand men living in the barracks of the town. Not far away there is a large common, where reviews are often held.

Salisbury Plain, in Wiltshire, is also used as a place of exercise and practice for our soldiers. Here the troops have sham fights and go through drills of various kinds, which prepare them for their work. On this plain is Stonehenge, the huge circle of upright stones, of which we have read in our history books (see page 148).

Another soldiers' town is Woolwich, near the Thames, just below London. Here there are



STONEHENGE ON SALISBURY PLAIN.

large workshops, in which guns, shot, shell, swords, bayonets, and other things used by the army are made.

Here also the war stores are kept, and there are very large barracks and a school, where young men are trained as officers.

War stores are also kept at Chatham, on the southern shore of the Thames estuary, at Devonport on Plymouth Harbour, and at Portsmouth. A place where war stores are kept is called an arsenal.

CHAPTER XXX.—THE BRITISH NAVY.

GREAT BRITAIN has been called the "mistress of the seas." Not only is her fleet of warships the largest in the world, but if any two of the other great navies were to join against her she could meet them without fear.

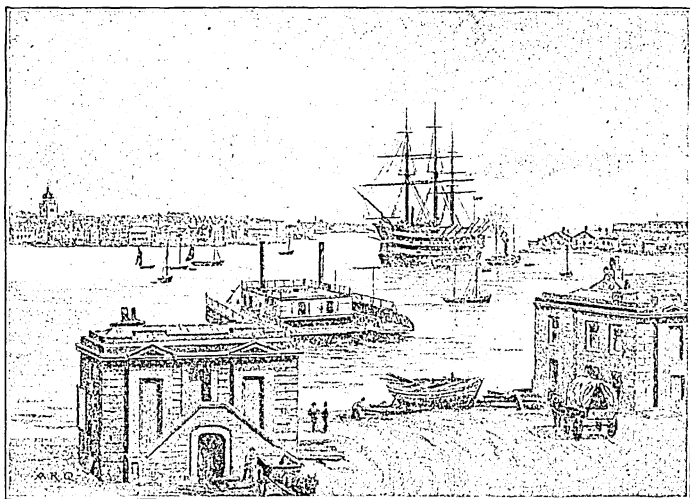
The enemy would try to stop our trading ships, which bring us food and many other useful things. They would also attack the countries which form parts of our Empire, and try to do them all the harm they could. So we need a large number of men-of-war if we are to hold our own.

The warships are of several kinds. The chief kind is the battleship, which is covered with thick steel plates to stand the shot of the enemy's guns. There are also "cruisers," which are quicker than battleships, but have not such thick steel plates on their sides.

Then there are torpedo-boats, which are much smaller than the battleships and cruisers. The torpedo, from which they get their name, is a kind of steel fish with machinery inside it, which sends it through the water very quickly.

In the fore part of it there is a large quantity of gun-cotton. When the torpedo hits a ship under water, the gun-cotton explodes and blows a great hole in her side.

Some of the ships are built at the naval dockyards; others come from the ship-yards of the Tyne and Thames. The chief British dockyards are at Portsmouth, Devonport, and Chatham.



PORTSMOUTH HARBOUR.

The largest is at Portsmouth, which has been a naval town since the earliest times. It reminds us of Nelson, "the greatest sailor since the world began."

In one of its streets may be seen the house in which he spent his last hours in England before he set sail to fight and beat the French and Spaniards at the Battle of Trafalgar.

In the dockyards are stored the many fittings needed for warships; there are also, at a safe distance, buildings called magazines, where powder, shot, shell, and torpedoes are kept.

Each dockyard has a high wall round it, with a few gates set wide apart from each other. These gates are guarded by policemen to keep out people who have no business inside.

Though we may be at peace with other nations, it would not be wise to let them know how we are making ourselves ready to fight when called upon.

Warships are brought to the dockyards to be painted and repaired. Some from the yards of the Tyne or other places have their fittings put in at the dockyard, for when they are launched they have, as a rule, no armour on their sides or guns on board.

CHAPTER XXXI.—COUNTY TOWNS.

IN each of our counties there is a town known as the county town.

Some of these county towns bear the same name as the counties in which they are found. This is the case with more than half of them, as we can easily find out by counting.

We might mark these counties and county

towns on the map and note where they lie. Those in England lie mostly in the middle of the country, and north of the Thames. Those in Wales are to be found in all parts of the country.

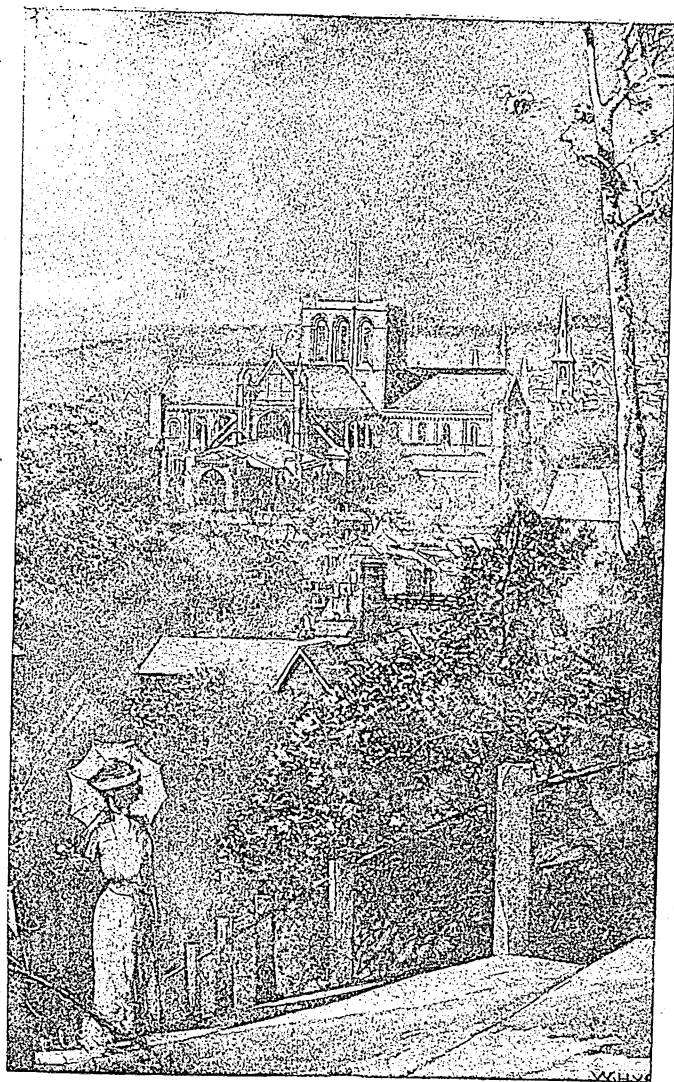
The rest of the county towns have names differing from those of their counties. But we must note that the names Norwich and Dorchester are very like the names Norfolk and Dorset. The county of Wilts has a town named Wilton; Kent has its *Canterbury*, Hampshire its *Southampton*, and the county Buckingham has a town of the same name; but these are not the county towns.

In the olden days the county town was the chief or capital town in the shire. But when we glance down our list of county towns we see at once that they are not now the largest and most populous towns in the country.

Some, like Newcastle, Derby, Leicester, and Norwich, are large and busy places; but many of the others are not very large, though each is important in its own county.

The Anglo-Saxons had for each shire an officer called a shire-reeve, and he held a court at the chief town of his shire. We still have the shire-reeve, though we know him now as the Sheriff; and he has an office at the county town.

The Sheriff does not try prisoners as he used to do. This is now the work of the judges, who



WINCHESTER, THE OLD CAPITAL OF ENGLAND.

come three times in each year to the county town.

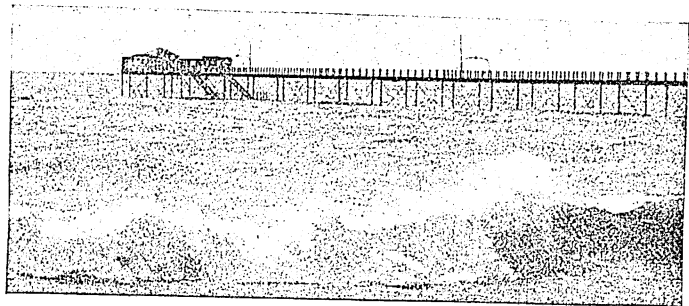
They are received with great honour and respect by the sheriff of the county; for they stand in the place of the King, and are treated in much the same way as he would be.

In each county town there is a hall in which the County Council meets. This Council is made up of a number of gentlemen who look after the affairs of the county.

They have to see to the roads, buildings, drains, and many other matters; and they also provide schools for the children where they are needed, but not for the larger towns of the county.

A number of our county towns have cathedrals. A cathedral is a bishop's church. In olden days the bishop helped the shire-reeve to govern the shire, and so his church was to be found in the chief or capital town.

There are a number of large towns in various parts of the country which are known as county boroughs. These are not under the Council which meets at the county town, but each has a Council of its own. There are about sixty county boroughs in England and Wales.



CHAPTER XXXII.—HOLIDAY AND HEALTH TOWNS.

SOME of our towns are visited by a large number of people during the summer holiday season. These places are mostly to be found on the coast, for nearly all British people love the sea.

If we look at the map we see at once that no part of the country is very far from the sea. And when the holiday season comes there are always a large number of trains which run quickly from the inland places to the coast.

Why do so many people make for the seaside as soon as they can get the chance? Because they wish for change of scene, and because the air at the sea-coast is so fresh, pure, and healthy.

Some people like a seaside place where the air is cool and bracing. Such places may be found on our east coast.

Others like to go where the air is warm and

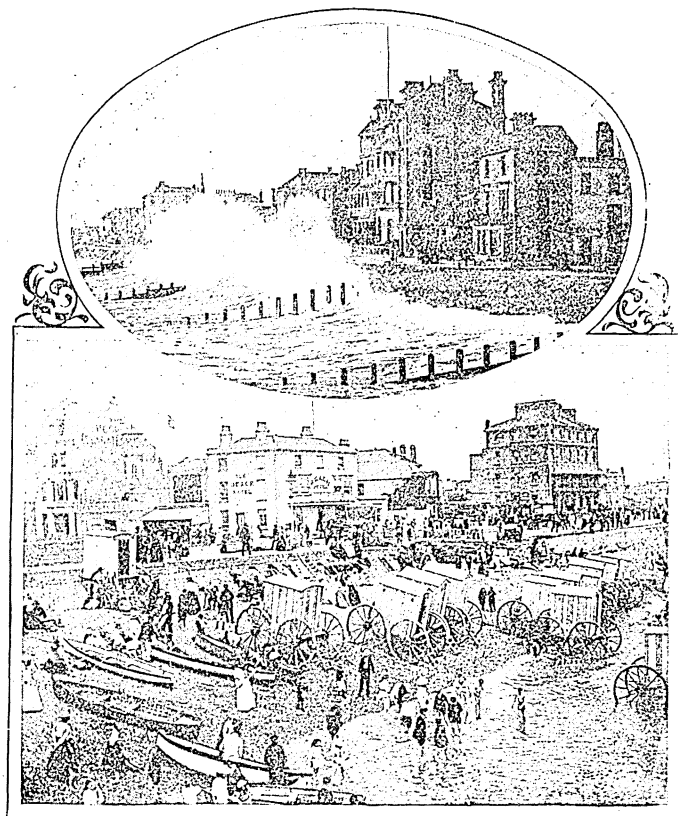
balmy, and where they do not meet with easterly and north-easterly winds. So they go to the towns and villages on our western and south-western coasts ; these are visited by warm winds from the Atlantic Ocean.

Everything is done at seaside towns to help the visitors to enjoy their stay. There are many bathing-machines and small boats for rowing or sailing. Nearly all the large seaside towns have long piers stretching out into the sea.

These are used by visitors who wish to enjoy the sea air without going upon the water ; in some places bathing is allowed from the ends of these piers.

There are also well-kept roads called promenades on the margin of the sea, sometimes just a little above the level of the water, sometimes along the tops of high cliffs. Here visitors may walk or rest and enjoy the sea view and the sea breezes.

Every boy and girl who has paid a visit to the seaside knows the delight of a walk along the seashore—the waves rolling up the brown sand and breaking into fleecy foam at our feet ; the tall cliffs, with their strange shapes and the caves and hiding-places beneath them ; the slippery rocks left bare by the tide, among which we can find strange living things, pretty shells, and seaweeds of many colours ; the soft, warm, yellow



AT THE SEASIDE.

sand, which seems to have been put there just for building castles and forts.

We are not going to give here a list of our seaside towns. This you can find in your geography book, pointing them out on the map. Begin by

finding that which lies nearest to your own home—that is, if you do not live in a seaside town.

Then take each of the great coal-fields in turn where the towns cluster thickly, and try to find from the map where most of the people would go when they want the sea breezes.

Some of them may travel to parts of the country far from their homes; but the larger number will want to reach the coast as quickly as they can; so you must look for the nearest places.

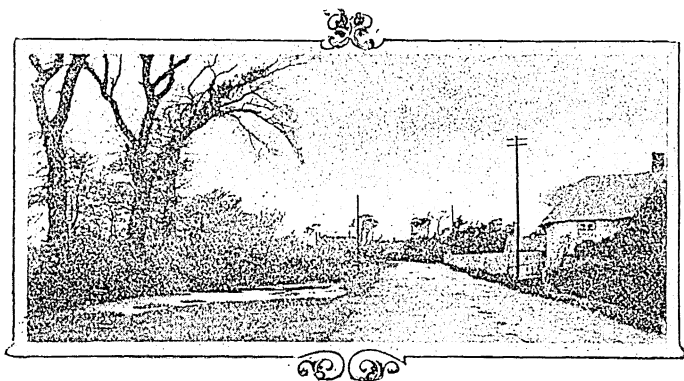
People sometimes speak of these seaside towns as “watering-places”; but this name ought to be kept for certain towns inland, where there are mineral springs, and where people go to “take the waters.” The water of these springs contains salts useful for certain diseases.

Buxton and Matlock in the Midlands are two of these “watering-places.” Here the water of the springs is quite warm, bright, and clear, with a slight tinge of blue.

One of the best known of these towns is Bath, which was a health town in the time of the Romans—that is, before there were any English in England.

Here people bathe in the waters, which come out of the ground quite hot, and are run into

large stone baths. A very great quantity of this water flows out of the earth every day, and there are no signs that the supply is likely to cease.



CHAPTER XXXIII.—ENGLISH ROADS.

WHEN the Romans ruled our land, before the English came, they made, or “built,” a number of good roads, most of them beginning at London.

They wanted these roads chiefly for sending soldiers quickly from one place to another; for they found it no easy task to make some of the Britons obey them.

A map of Roman Britain shows where these roads were. One ran north from London to Lincoln, thence to York, and then into Scotland, with a

branch to Carlisle. Another ran north-west to the Welsh border, and then north to Chester.

A third ran from Lincoln to Bath, and thence to Exeter. And there were others opening up different parts of the country, except the west and north-west, where the Britons held their own among the mountains.

The Roman roads were very well built, and some of them form the foundations of the roads on which we may travel to-day. They were raised above the land round about and well drained. They nearly always ran straight forward, often over bogs and through woods.

English history tells us very little about our roads, because there is very little to tell. For a long time the people used the old Roman roads; and where there were no roads they travelled as best they could. But they did not travel much; most of them lived all their lives in the place of their birth.

A writer of English history tells us the following about our roads two hundred years ago :

“It was only in fine weather that the whole breadth of the road could be used. Often the mud lay deep on right and left ; and only a narrow track of firm ground rose above the mire.

“At such places quarrels often took place, and the path was sometimes blocked up for a long

time by carriers, neither of whom would give way.

"Almost every day coaches stuck fast until a team of cattle could be got from some farm to tug them out of the mud. And in very bad weather things were still worse."

When the coal and iron of England and Wales began to be worked to a greater extent people began to look after the roads.

Each town and village had to make and keep in good order the roads which ran through it and lay near it on each side. In some places the people left their own work for certain days in the year to mend the roads.

Those who used some of these roads had to pay tolls at certain points where a gate was set up near a small cottage called the "toll-house."

The gate was called the "turnpike," because it took the place of the old turnstile, which had four bars or "pikes" at the top; and in time this name came to be used for the road itself.

These tolls made travelling by road cost a good deal of money; and as people began to move about more than their forefathers had done, they also began to grumble at the number of tolls they had to pay. There were toll-houses at every six or eight miles along the chief roads.

In time the tolls were done away with, and

now the care of our roads has been given to our County and other Councils.

But we still pay for keeping our roads in order, though not in the form of a toll. We pay what is called a "rate," and this money is used by the Council for mending the roads.

There are still tolls to be paid on some private roads in the kingdom; but as a rule we can travel by road in all parts of the country without being asked for a single halfpenny as toll.

A map of England and Wales, showing the towns with the roads between them, looks like a very close network; for good "highways" are now to be found in all parts except the very high districts.

Our roads are more important than they used to be, and as time goes on they will become still more so.

The use of the bicycle has made us look with more care to the state in which they are kept; and in time, when the motor-car comes into general use, they will, perhaps, be as busy as our rail-roads.

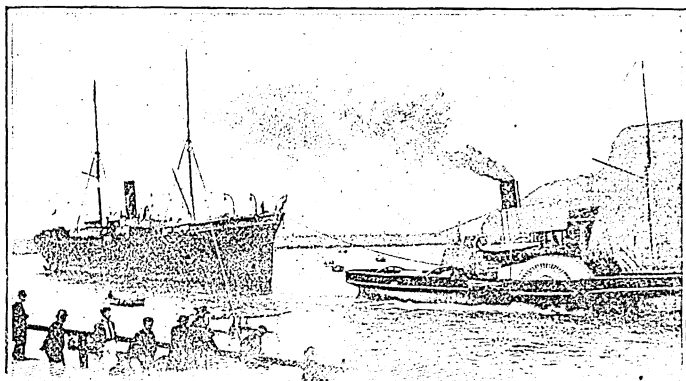


Photo by W. Jerome Harrison.

ENTERING THE HARBOUR.

CHAPTER XXXIV.—ENGLAND AS A TRADER.

WE may, if we will, look upon England as one of the world's great workshops.

The great workshop is always busy. From the factories the goods pass to the warehouses, but not to be kept there. They are sent not only to all parts of the country, but to all parts of the world. The goods sent out to foreign lands are called the exports.

In return for some of the things we send out we get back articles from all parts of the globe. These things are called our imports. We import

the stuff used in our factories, and export a large share of the goods which we make from it.

We get, for instance, raw cotton from India, and we send some of it back in the form of cotton cloth. Wool is sent to us from Australia, and we send back cloth, clothes, and other goods made from this wool.

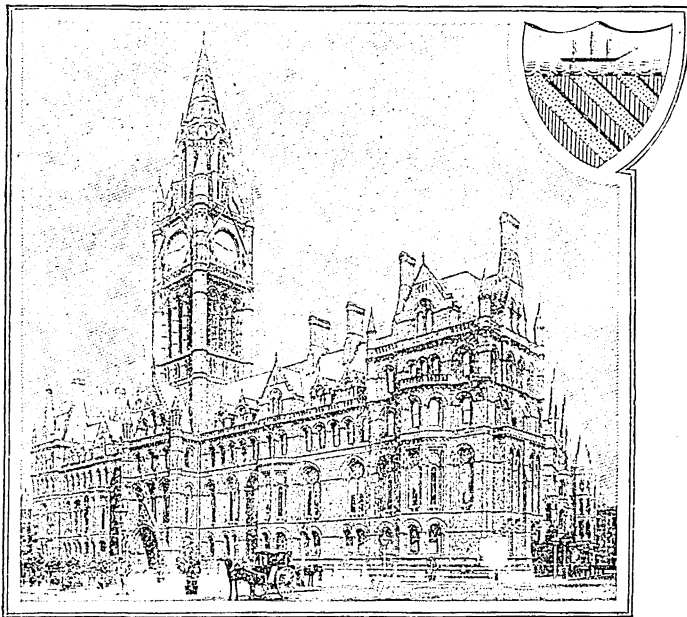
As a trader, our country is first among the nations of the world. The foreign countries which come next to her are Germany, which lies across the North Sea; the United States of America, on the other side of the great Atlantic Ocean; and France, our nearest neighbour, across the English Channel. But at present we are a long way ahead of these three countries.

It is possible to turn the globe so that almost all the land on the earth can be seen at once. When we do this, and look for the British Isles, we find them almost in the centre.

Thus we see that our country has a very good place for trading with other lands; for the nearest point to all parts of the rim of a circle is at the centre of that circle.

Of course, a great deal depends upon the fact that our country is an island. With the sea all around us we can more readily reach the shores of the lands with which we wish to trade.

A great trading country ought to have a large



MANCHESTER TOWN HALL.

number of good harbours for her ships. Harbours are openings in the coast where there is deep water and shelter from bad weather.

Now, our country has a great many good harbours; but many of these are at present almost useless, because they are not in the best places on our coast.

Some of the finest are on the coasts of Cornwall and Devon. But these coasts are far away from the coal-fields and the factories; and so the harbours are not of much use for trade.

It has been necessary to make harbours at various points on the coast. Barry Dock, to the west of Cardiff, is a good example, where a fine harbour has been made on a flat, sandy shore.

Harwich in Essex also has a harbour made by man. The mouth of the Mersey is crossed by a sandbank, which prevents big ships from passing up the river at low tide ; but dredgers are always at work taking away the sand and keeping the river open.

These are a few examples which show that England's place as a trader is not due to good fortune. It is due to the energy and hard work of her people more than to anything else.

It is this which has given her a great fleet of trading-ships and men-of-war to protect them when they need it, which has made harbours where there were no harbours before, and which has built up a great empire beyond the seas, every part of which trades with the Mother Country. A large share of our sea-trade is done with these lands where our own people live—Australia, New Zealand, Canada, and South Africa.

But British trading-ships are to be found in every sea. Wherever there is ocean-trade there flies the Red Ensign, the flag of our traders.

A great amount of our sea-trade, however, has

nothing to do with our own ports. Many of our ships are carriers, and run from one foreign port to another.

Now ask yourselves these questions, and try to find out the answers :

1. How are the things made or grown near our own homes sent away to other parts of England, or to foreign lands ?

2. What is a harbour ? What is the difference between a natural harbour and an artificial harbour ?

3. What is the nearest harbour to your own home district ?

Try also to get some idea of what a busy seaport is really like. You can get a little help from some of the pictures in this and other books ; but the best way is to pay a visit to one near your home, and to keep your eyes wide open when you do so.

CHAPTER XXXV.—OUR SEAPORTS.

THE largest seaports of England and Wales are nearly all to be found near six great openings in the coast.

These openings are the mouth of the Tyne, the Humber, and the mouth of the Thames on the east coast ; Southampton Water on the south

coast; the Bristol Channel and mouth of the Mersey on the west coast.

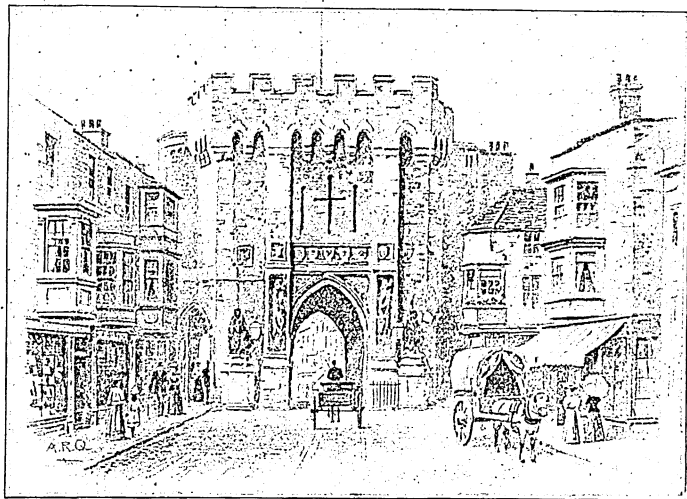
We can see from the map that four of these openings go in pairs. The Mersey and the Humber are almost opposite each other; and the mouths of the Severn and Thames form another pair.

Near four of these open doorways lie great beds of coal and many busy towns. The other two are far away from the coal-fields and factories.

London on the Thames is by far the largest and busiest of our ports; but it takes in much more than it sends out. It stands at the end of each of our great railways; and along these it sends goods which it gets from all parts of the world.

The *Port of London* stretches from London Bridge to the Nore lightship, a distance of fifty miles; and for the whole of this distance the river is deep enough and wide enough to be used by large ships. Below London Bridge there are a number of large docks—places where the great ships unload their cargoes.

We turn next to the port of Southampton. It is not now the second port in rank, though it once held this place; this was before the great coal and iron beds of the North and Midlands were worked so much.



THE BAR GATE, SOUTHAMPTON.

A glance at a map of the world will show that the south coast of England is most easily reached by ships from distant lands.

So Southampton has become a starting-point for steamers, which take people to countries far-away. It is also within easy reach of London by rail, and this has helped to make it such a busy place.

Liverpool on the Mersey is our second great port; and many of its ships sail across the western ocean to America. From that land they bring a great deal of raw cotton, which, as we have seen,

is spun and woven in the towns on the Lancashire Coal-field.

About one-half of the goods we send out go from this port. Its docks are crowded with great ships; among them are the steam liners which cross the Atlantic in about six or seven days—"ocean greyhounds" they have been called.

We turn next to the Bristol Channel. Here we have Bristol, a few miles up the Avon, a very old port, whose merchants, as a rule, look westward for their trade.

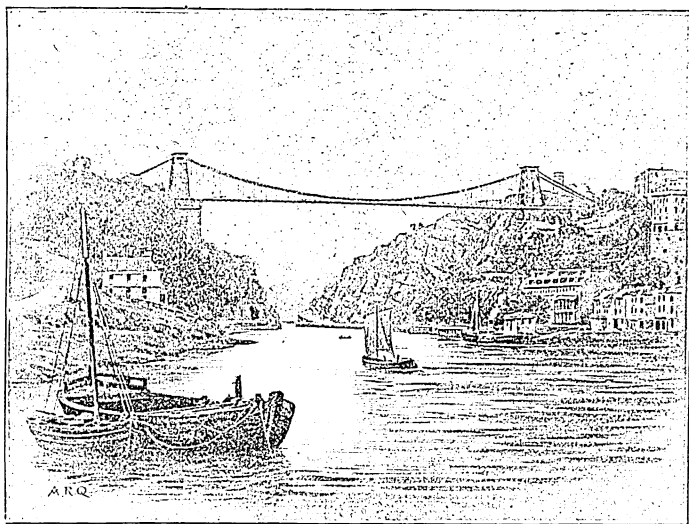
Some of their ships go to Ireland, and bring from that country a great deal of butter, cheese, eggs, and bacon. Others go much farther—across the ocean to the islands called the West Indies, which have a very hot climate.

From these islands they bring sugar, rum, and fruits of many kinds such as we cannot grow in our country. Many of the bananas sold in our streets and shops came in Bristol ships across the western ocean.

On the coast of South Wales are the two large ports of Swansea and Cardiff. As we have already seen, the former takes in a great deal of copper ore, smelts it, and sends out the fine copper again. The chief trade of Cardiff is in coal, and one of her best customers is the British Navy.

The leading port on the Tyne is Newcastle,

which lies about thirteen miles from the mouth of the river. It sends coal along the east coast to London; and to all parts of the world it sends



CLIFTON SUSPENSION BRIDGE, NEAR BRISTOL.

steel and iron goods, made in the great works and factories on the banks of the Tyne.

The two leading Humber ports are Hull and Grimsby. The chief trade of the latter is in fish; but it also shares in the work done by the port of Hull.

This is to collect woollen goods from Yorkshire, iron and steel goods from the Black Country,

pottery from Staffordshire, and machines from Lincoln; and to send them out, mostly across the North Sea, to the countries of Europe.

People who wish to visit Norway, Sweden, and other countries in the North of Europe often start from Hull or Grimsby.

There are many other large seaports on our coast, and we have very likely missed out the one nearest to you, and in which you take most interest. But we do not wish to fill this chapter with names.

Find out your own port on the map. Note where it lies; and try to guess where you should expect it to look for its oversea trade, and what it would send out. Then find out whether your guesses are right by asking questions at home or at school.

CHAPTER XXXVI. — TRAVELLING : THEN
AND NOW.

HERE is a notice to travellers taken from a bill printed two hundred years ago :

“All that wish to pass from London to York, or from York to London, or any other place on that Road ; let them repair to the *Black Swan* in London, and to the *Black Swan* in York. At both these places they may be received in a Stage Coach every Monday, Wednesday and Friday, which performs the whole Journey in Four Days ; and sets forth at Five in the morning.”

Now let us turn to a railway guide to see how we may perform the journey in our own day.

Here we find that from a London station there run to York on every day except Sundays about twelve quick trains. One of these, which starts in the morning, does the journey in about four hours.

The stage-coach was so called because it ran for a certain number of miles and then stopped for a change of horses. This is called running by “stages.”

Passengers rode either on the top of the coach or inside. There was room for two beside the driver, and there were three other seats behind. In the hindmost sat the guard of the coach, who

now and then blew his horn or trumpet, which told the people of the villages that the stage-coach was near.

Then they would come out to see it pass; for in their quiet lives even the passing of the coach was a great event.

A ride on the top of a stage-coach must have been very pleasant—when the weather was fine. There were times, however, when this way of travelling was not only slow, but tiresome, or even dangerous.

In snowy weather the coach was often brought to a full stop by running into a drift, and many a traveller spent a weary night imprisoned in the snow.

Bad roads often caused delay, and a broken wheel or a snapped trace meant a stop sometimes of several hours. Then there was always the danger of meeting with mounted thieves known as highwaymen.

These men would often stop a coach; overpower the driver and guard; and take from the passengers everything of value which they had about them.

When people first began to use railways they did not find travelling much more comfortable than by stage-coach. Some of the early first-class railway carriages were made up of three stage-coaches built together on a four-wheeled truck.

There were seats on the top, and the guard sat at the back of the last coach. Of course, there were no tunnels or low bridges, and the rate of travelling was very slow.

Second and third class passengers rode in carriages which were open to the weather on all sides. Some of these carriages were little better than the trucks in which we now carry cattle. Many people rode in their own carriages, which were firmly fixed on low waggon.

In our time everything is done to make travelling comfortable, quick, and easy. Great care is taken in building railway carriages so that they will run very smoothly.

The insides of the carriages are nicely furnished. There are cushions to the seats, gas or electric lights in the roof, and racks for light luggage.

On long journeys it is possible to get a meal on some express trains; for they have cars in which food may be bought and eaten, as in the eating-houses and tea-shops of our large towns.

A railway journey, especially a long one, affords one of the best ways of finding out something about the geography of our country.

Before starting, we should get a map of England and Wales and find out which way we are going. We must note the kind of country through which we are to pass—flat, hilly, or mountainous—and

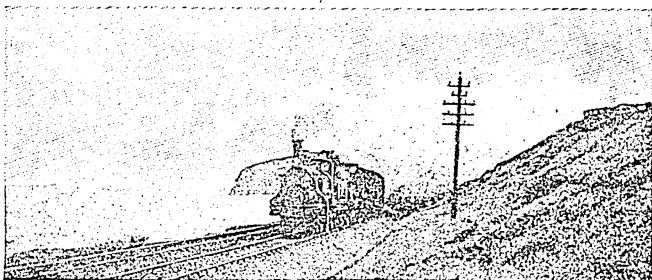
see what towns lie on our way and for what they are noted.

Then when we set out we must keep our eyes wide open. It is a very good plan to have a railway guide-book which tells all about the places on the way; and in this book will be found a map, by means of which we can trace our way as we go.

A run through a cutting will show us the kind of soil and rock to be found in that part of the country. We can tell to what use the soil is put as we whirl by the fields in the open country—here is pasture; there are cornfields; now we pass by large market gardens or orchards.

A run through a large town ought to teach us a great deal. Very often the line goes right through the middle of the town. Then we can see for ourselves what kind of buildings there are, and whether most of them are of stone or brick; what the people of the town work at, by looking out for works and factories and reading the large signboards on them; and whether the town has close and narrow or broad and open streets.

These are only a few of the things to be noted on a long railway journey. There are many others of interest which we have not space to mention. But, as we have said, such a journey ought to provide a geography lesson of a new and very pleasant kind.



CHAPTER XXXVII.—OUR RAILWAYS.

A RAILWAY map of England and Wales looks more like a puzzle than anything else. It shows a close network of lines in all parts of the country; and if you are set to study it you do not know where to begin.

Perhaps the best plan would be to put it aside until you have found out one or two things which will help you in the study of it.

The first thing you must do is to find out something about the railways near your own town or village. Boys and girls who keep their eyes open may have seen certain capital letters on railway engines and carriages like these: L.N.W.R., or G.N.R., or G.W.R.

These stand for the name of the company which owns the line, and the carriages and engines

which run on it. The first is the London and North-Western Railway Company ; the second is the Great Northern Railway Company ; the third is the Great Western Railway Company ; and there are several others the names of which we can find out on the map.

Here, then, is the first question : " Which railway company runs trains to and from the place in which I live ? "

If you live in a large town there may be more than one company, and you must find out the name of each. Then you have taken the first step in the study of our railways.

The next is to find out which way you would go, if you left your own town or village to pay a visit to some town not far from your home.

This means making a map of your own district with your native place in the middle and the towns near at hand grouped about it. You must be careful to put the towns in their right places, and learn the distance from your own home to each of them.

Then you must ask yourself, " How can I get to London ? Must I go north, south, east, or west ? Where does the line from the station at home join the line to London ? And how far must I travel on this line before reaching the great city ? "

Then, when you have found the answers to

these questions, you can add to your home-made map.

Why should we find out how to get to London? Because London is the great railway centre of the country, and all the great railroads run to it. If you turn now to a railway map of the whole country, you will see how the lines run in all directions to London. We often call London our great railway *terminus*, because it is the place where each of the great lines ends or *terminates*. Of course, if we wish, we may also look upon it as the place where the railways *begin*.

It does not seem quite right to call London a centre when we note its place on the map. We know that the centre of a circle is at the same distance from all points on its outer rim; and if we look for the real centre of England, we must point out a spot in or near the county of Warwick.

London is in the south-east corner of the country, and distant from the great towns of the Northern Coal-field by almost the whole length of England. Yet it is our great railway centre, chiefly because it is a trade centre, and the place where the government of the country is carried on.

As we have seen, it is our busiest port, and takes in much more than it sends out by sea.

The goods taken in have to be sent to all parts of the land; so that London must be in touch with all the great railways.

We find, then, in London a large railway-station belonging to each of the great companies. These stations form a kind of ring round about the central part of London, in which St. Paul's Cathedral is to be found.

CHAPTER XXXVIII.—THE MOTHER CITY.

LONDON is often called the greatest city in the world; but the real "City of London" is only a small part of it.

It would puzzle you to hear a person in London speak of going "into the City." "Why, you are already there," you might say, with some truth. "What do you mean?"

There is no puzzle about it. We use the word "city" to mean either a place with a cathedral or a very large and important place like Birmingham. In this sense the whole of London is a city. But within it is a small part of about one square mile round about St. Paul's Cathedral which is known as "the City," with a capital C.

In the City the greater part of the business of London is carried on. Here is the Mansion House in which lives the Lord Mayor; and from here



THE STRAND.

starts the procession known as the Lord Mayor's Show every ninth of November.

Not far away stands the Royal Exchange, where the merchants meet, and the Bank of England. Here, too, there are many business houses, stores, offices, and shops of all kinds.

During the night there are only about 30,000 people in the City, but during the working hours the number is perhaps ten times as great. When work is over for the day many of them flock to the railway stations; some crowd the omnibuses, to be taken to their homes on the outskirts of London.

The London of which "the City" forms a part is about equal in size to a square which has a side eleven miles long. Into this space are crowded together about one-eighth of the people in England and Wales.

It is one of the wonders of the world, this great and busy centre of human life. And each year it grows larger, and one wonders when it will cease growing. It contains not only Britons, but thousands of people from every country in the world.

Nowhere, perhaps, in the world are people so very busy. They rush past each other in the crowded streets, and seem to be running a race with time. Greetings are rare, for most of the

people in the hurrying crowds are strangers to each other.

At all times of the year London is full of visitors, not only from all parts of the country, but from all parts of the world; for the place is full of interest. Passing from one part to another, we can trace a good deal of the history of the English people.

Here, on the bank of the river, stands the old Tower of London, built in the time of William the Conqueror; and within a few hundred yards the river is spanned by the lofty Tower Bridge, built in the later years of Queen Victoria's reign.

And every reign between these two has left its mark on some part of London, which has been the English capital or Mother City since the time of the Normans.

In the Abbey of Westminster our kings and queens are crowned, and here many of them have been buried. Here also are the graves of some of our great poets, painters, soldiers, sailors, and statesmen. If only the walls of the gray old Abbey could speak they could tell tales of many a scene, both of sorrow and of rejoicing.

St. Paul's Cathedral also holds the tombs of many of our great men; among them are Nelson and Wellington, who saved England from the French Emperor Napoleon.

The Houses of Parliament form one of the most interesting groups of buildings in London. They stand by the side of the river not far from Westminster Abbey. Here the laws are made which rule the lives of each of us for the good of all.

We might go on to name many other interesting historic buildings and places to be seen in London, but our space forbids. You already know many stories which you have read in your history books. It may interest you to take one of these books, and find out how often mention is made of London.

CHAPTER XXXIX.—FAIRS AND MARKETS.

BEFORE the days of canals and railways the greater part of our inland trade was done at fairs; these were held in different parts of the country at certain times of the year. One of the largest and busiest of these fairs was held at Stourbridge, near Cambridge.

This fair lasted during the month of September; it drew dealers and buyers not only from all parts of England, but also from lands across the North Sea; for it was easy to reach this town from the ports on our east coast.

The foreign merchants brought silks, cottons, and velvets from Italy; fine linen and woollen

cloth from Flanders, across the North Sea ; wine and fancy goods from France and Spain ; timber, tar, and pitch from the forests of Norway ; iron,



READY FOR THE FAIR.

copper, flax, furs, and amber from Germany. In exchange the English dealers brought to the fair wool, corn, barley, horses, cattle, tin, and lead.

Another large yearly fair was held at the old town of Winchester. Leeds had one, in which woollen cloth was the chief thing sold. This town was easily reached by the foreign dealers, who brought their ships up the Humber.

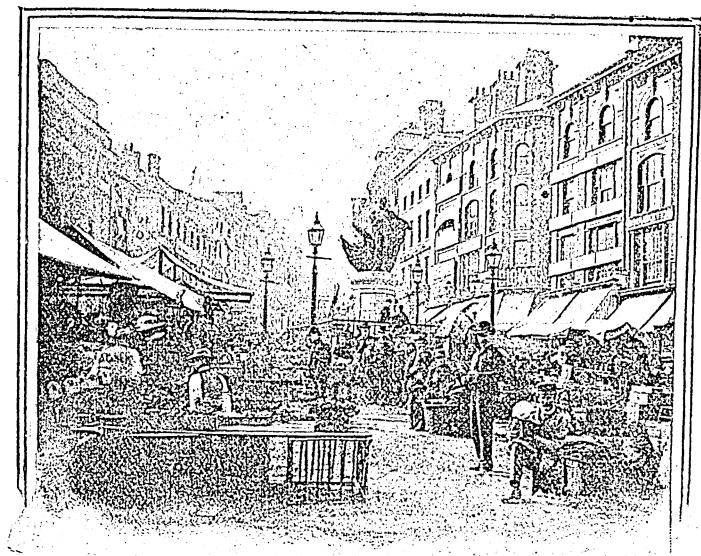
Besides these yearly fairs, open markets were held, sometimes once a week, in certain towns which were noted for some special article. There was one at Lincoln for cloth, at Hitchin in Herts for ale, at Ripon for horses, at Gloucester for iron, at Northampton for leather, at Grimsby for cod.

From these towns the goods were taken away on the backs of horses. Other markets were held every few days all over the land for the sale of food. These sales took place in a broad open space, generally near the middle of the town.

In those days there were very few shops in the small towns and country districts. In our time we can buy all we want in a very short time if we live in a town; and if we live in the country we can send an order by post or telegraph and have goods sent to us by rail or road very quickly.

But many of our towns still have their market days, though it is only in the smaller country places that people depend upon the market to get food and other things. Horse and cattle fairs or markets are common enough, even in large towns, and many of our older towns and cities have places set apart for the sale of some special thing.

Thus we may find a meat market, a vegetable market, a fish market, in a town which has many shops. These markets are, however, used mostly



A TOWN MARKET (BULL RING, BIRMINGHAM).

by the shop-keepers themselves. They buy in large quantities and sell in smaller quantities to their customers.

London had several markets in the olden days. Some of them are still held. Billingsgate has been for hundreds of years the great fish market. To this place the fish are brought by boat up the Thames, or by rail, and the fishmongers buy their stores for their shops. Another old London market is that of Covent Garden, where fruit, flowers, and vegetables are sold.

The London cattle market is held to the north of the City, and is the largest of its kind in the world. And in the City itself there are large markets for meat and food of all kinds.

The most famous market of old London was that of West Cheap, in the central part of the City. The road which ran by the side of the great open space was called Cheapside. This space is now filled with streets of houses, shops, offices, and warehouses.

But Cheapside is still there, and is one of the busiest streets in the whole of busy London. Running into it we find streets which bear such names as Milk Street, Bread Street, and The Poultry. These remind us of the great open markets of London in the days of long ago.

Now set to work and find out what you can about the fairs or markets of your own district.

CHAPTER XL.—OVER THE SCOTTISH BORDER.

IN the chapters of this book we have kept our minds, for the most part, on England and Wales. Let us now take a peep beyond the borders of this country, and learn a little about our nearest neighbours.

We shall turn first to the kingdom of Scotland, which lies to the north of England and takes up about one-third of the area of Great Britain. If we travel by rail, we enter Scotland either at Berwick or at Carlisle, at either end of the border between the two countries.

We find ourselves running through country which is very like the upland or hilly parts of England. Yet it is known as the Scottish Lowlands, because farther to the north lies some of the highest land in Great Britain.

There are not many towns in the Lowland country, and most of the people seem to be engaged in farming. In the eastern Lowlands there are very fine farms, some of the finest in the world; and on the grassy slopes of the Cheviots and in the western Lowlands there is very good pasture-land, on which large flocks of sheep and herds of cattle are fed. And where the cattle are found there are large creameries and dairy farms.

North of the Lowlands lies a plain, drained to the east by the River Forth, and to the west by the River Clyde. This is the most populous part of Scotland. Here there is a large coal-bed, and, as we might expect, here also the large towns are to be found.

Glasgow, on the Clyde, is the largest, and round

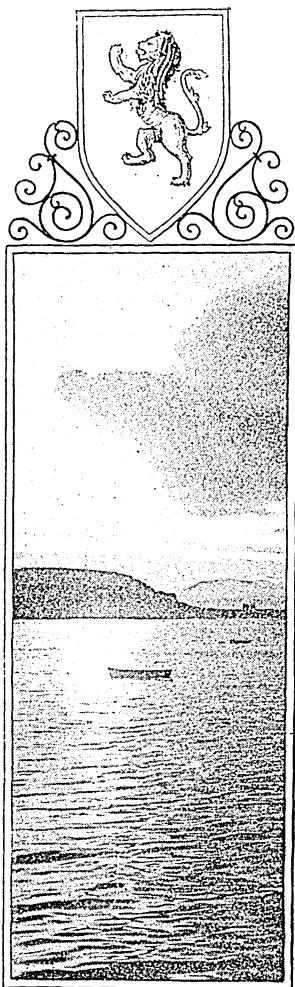
a coast plain, on and near which lie several towns of note. Two of the largest are the ports of Aberdeen and Dundee ; and if we trace the railway which joins these two towns to Edinburgh we shall find that it crosses the mouths of the Forth and Tay. It does so by means of the great Forth Bridge and the Tay Bridge, the former being one mile and the latter two miles long.

Still farther north are the Scottish Highlands, which lie, generally speaking, to the north-west of a line drawn from Aberdeen to Greenock ; and, as we can see from the map, take up much more than half of the whole country.

It is not easy to give in a few words any idea of the beauty and grandeur of this great mountain region. Here are lofty mountains, deep glens and passes, wide moors and deer-forests, beautiful lakes or lochs, streams and waterfalls, and stern, rocky coasts, broken on the west by long arms of the sea known as sea-lochs.

Sportsmen come here for the deer-hunting in the forests, as the wide tracts of upland are called, though they contain few trees ; they also shoot the grouse on the moors in the autumn, and many come for the splendid fishing which the Scottish rivers afford.

The Scottish Highlands are divided into two great parts by the hollow known as Glenmore,



IN THE WESTERN HIGHLANDS.

which runs in a north-easterly direction from Loch Linnhe to Moray Firth. In this hollow there is a chain of lochs which have been joined up to form a waterway, known as the Caledonian Canal.

Along this canal it is possible to pass from sea to sea and so avoid the passage round the rocky and stormy coast of the North of Scotland. Near the lower end of the Caledonian Canal rises Ben Nevis, the highest peak in the British Isles.

Scotland contains about as many people as London; and does about one-tenth of the oversea trade done by England and Wales, most of this being from the ports on the busy River Clyde.

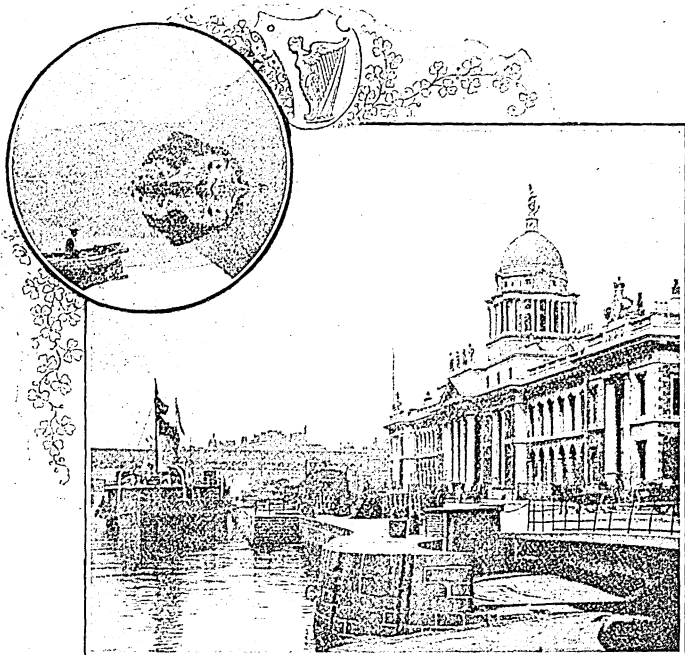
CHAPTER XLI.—ACROSS THE IRISH SEA.

WE can reach Ireland, our western neighbour, by boat from Holyhead to Kingstown, on Dublin Bay; from Barrow to Belfast; from Milford, in South Wales, to Waterford; or from Plymouth to Cork.

Let us suppose that we land at Belfast, on Belfast Lough, in the North-East of Ireland. We find ourselves in a busy city, like many in England and Scotland; and we should not be long in finding that it is noted chiefly for its great shipyards, which have turned out some of the largest steamers afloat, and for its linen trade. In this north-eastern corner of Ireland is grown the flax from which linen is made; and this is the only place in the British Isles where this useful article is grown to any great extent.

Though Belfast is the largest Irish city, Dublin, which lies farther south, is the capital, and has a university. It has also works where woollen goods, lace, stout, and whisky are made.

On the south coast there are two ports—Waterford and Cork—which do a great deal of trade with Great Britain. They send over a good deal of butter and cheese as well as a large number of fine horses. For they are near the beautiful



DUBLIN CUSTOM-HOUSE; AND A PEEP AT KILLARNEY.

horses, cattle, and pigs. The peasants live mostly on the potato, of which very large crops are grown, and when these crops fail there is great distress. Ireland has, at several times, lost a large number of people owing to a potato-famine.

There is much bog-land in the centre of the country, and though the land is on the whole well watered, the rivers are not very useful. A glance at the map will show that there are many

From this place we get a large number of ornaments and other pretty things.

The people of France grow a lot of fruit and grapes. They send us a great deal of the fruit. And they make wine from the grapes, and send it to all parts of the world.

From France we also get a lot of flowers. Many of these are sold in the London



streets
when
there
are no
flowers
to be got in this
country.

Another land of flowers is Holland, the country of the Dutch. This land lies across the North Sea from England. It is very flat, and in places the land is below the level of the sea.

To keep out the sea the people have built walls of sand or stone called

Note.—The above types are French, German, Norwegian, and Dutch.

CHAPTER XLIII.—OPEN EYES AND EARS.

WE have learnt in the chapters of this book a good deal about the geography of our native land. We have also seen what a very interesting thing a map of England and Wales may become when we know how to use it in the right way.

There are many other ways of finding out things about our country besides reading books about it. If we keep our eyes and ears open, we can pick up a good many useful facts here and there.

Let us suppose that a boy is sent to a shop for a pound of cheese. In the shop he finds the cheeses set out on the counter, and marked with different names—Cheshire, Cheddar, Gloucester, Stilton, Wensleydale, Gorgonzola, American.

This sets him thinking. He wishes to know where the places are from which these different kinds of cheese have come, or are named. Off he goes to his map of England and Wales.

Being a quick boy, he did not expect to find America in the map of his own country. Cheshire and Gloucester are easy enough; and if he has a good memory he knows from one of the chapters of this book that Cheddar is the name of a village in Somerset. But the other names trouble him.

So he begins to ask questions; and finds out in